

AN INTRODUCTION TO MONEY

BY

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PREFACE

THE present volume has a double aim: it is intended to be of service to undergraduate students of the subject of economics during their first, and possibly during their second years; it is intended equally for the general reader who is interested to enquire how his own welfare and that of men in general is affected by the monetary system. Thus I have not sought to avoid the definition of terms and the description of institutions; on the contrary, I have endeavoured to reveal the pitfalls hidden beneath economic words in the hope of saving labour and misunderstanding on the part of those who intend to read the works of numerous authorities or of those who read economics supposing that their own use of terms coincides with that of writers on this subject; again, I have tried to describe monetary institutions in such a way that the vital relationships between them are made plain, in the hope that the monetary system as a whole may emerge before the eyes of the reader in the form of a working model.

To illustrate descriptions and arguments, I have sought to utilise matters commonly within the experience or knowledge of the general reader and the university student: it is in this sense that monetary history has been included in this book. In a similar manner, I have preferred to cite events of the last few years in preference to those of times now fading from the memory.

In writing of monetary theory, my aim has been to expound in an introductory and elementary manner the ideas of Mr.

PREFACE.

J. M. Keynes and of those in substantial agreement with him. Early in this book, I have dealt at some length with the works of Mr. Keynes, for it has seemed to me that much description and argument must be tedious and incomprehensible without a prior acquaintance with monetary theories applicable to the world of experience. Opposing ideas and some remote considerations in the field of monetary theory are mentioned, but not examined at length.

In the course of the later chapters, I have attempted to examine questions of especial importance at the present time, and to suggest the possibilities and probabilities of the future in monetary matters; whilst the inclusion of such considerations may be somewhat unusual in an introductory book, it is, in my view, from these things that the study of money derives its importance and its interest.

I am very greatly indebted to Mr. J. M. Keynes and to his publishers, Messrs. Macmillan & Co. Ltd., for permission to reproduce considerable sections from the text of the well-known works of that eminent authority.

My thanks are due to several kind friends who have assisted in the preparation of this book, and, in particular, to Mr. Hugh Townshend, who was kind enough to read the manuscript and to make many helpful criticisms and valuable suggestions.

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CHAPTER I

DEFINITIONS

§I

The necessity of definitions.

Definitions are a boring necessity. What is a definition, and why do we need it? A definition is a description of such a sort that no one can remain in doubt about the identity of the thing defined. An ordinary description might apply equally well to a number of things; a definition must apply only to the thing defined; a definition should be inclusive in the sense that it covers all the characteristics of the thing defined, and exclusive in the sense that no other thing should fit in with the terms of the definition.

In theoretical geometry, for instance, a straight line is defined as the shortest distance between two points; but in ordinary speech, when we speak of a straight line, we use the expression loosely to mean something roughly straight. We never meet the straight line of the school textbook in actual life; what we commonly call a straight line is not really one according to the definition, though it may be near enough for ordinary purposes. Just in the same way, we speak loosely about money, capital, income and such things, but in economics we have to know exactly what we are talking about, else we shall become confused. Real trouble arises because, when we define a term in economics, we often have to go on to define the words used in our definition; for all the words at our disposal are debased in ordinary speech so as to mean several different things. Worse than that: different economists have defined the same words in different ways, so that when Prof.

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Hoot¹ talks about "incomes", he may mean something different from what Dr. Coot¹ means by "incomes". This is a sad business, for it causes great confusion, and economics is difficult enough without making it harder than it need be. Obviously the danger of confusion will be lessened, however, if it is explained clearly that different people may mean different things by the same words and the same things by different expressions. The definition of terms is a wearisome business, but it will have to continue until the happy days when the meanings of words in economics are universally agreed.

The definitions in this book are not, of course, original; they attempt to coincide with those of well-known authorities whose names and works are cited both in the text and in the appendices to each chapter which suggest further reading.

§ II

Money defined as the means of payment and valuation, as both medium of exchange and unit of account. Money as the agent of indirect exchange. Narrower definitions. "Money is as money does." Money sometimes meaning the loan of money.

The subject of this book is money, and this is the first thing which we have to define. We define money as *the means of payment and valuation*: on the one hand, money is the concrete medium of exchange, the thing given from one person to another in payment; and, on the other hand, money is the abstract unit of account, the mathematical apparatus used to express price.

Let us take the concrete sense: first, there are the primitive types of money, desired for their own sake: gold, cattle and other things of paramount importance to primitive peoples; second, there are the advanced types of money developed in civilised communities, wanted not for their own sake but because they can be used to buy desirables: postal orders, cheques, coins, currency notes, bankers' drafts, etc.

¹ For the sake of brevity, we shall use two fictitious names, Prof. Hoot and Dr. Coot, the former representing an academic and theoretical point of view and the latter a practical, "City" point of view. In order to indicate the cleavage between the points of view, the remarks and ideas ascribed to these fictitious persons are, in places, somewhat artificial.

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All these forms of money, primitive and civilised, have this characteristic in common: that they are *generally acceptable* within a reasonably large economic area in exchange or payment, for *anything* which can be bought—for goods or services in the broadest sense. General acceptability is the essential quality of the medium of exchange.

Perhaps it is legitimate to regard misers as mental throw-backs in whom the desire to accumulate money has survived the development of money from the primitive form, of which the intrinsic value is vital; to the civilised form, of which the intrinsic value is incidental.

Now for the abstract side of money: we said that money, in this sense, was a mathematical apparatus, which sounds like making the matter more difficult than it need be, especially if the word, money, conjures up in our mind only the simple, concrete pounds, shillings and pence of everyday transactions. But ask instead what is an inch. Can an inch be picked up and handled? An inch is a distance, a creation of the mind, an idea; it can be thought of or represented by strokes and numbers on a ruler, but itself it is intangible, invisible and unsubstantial. So is the abstract side of money, the unit we call a pound, or any other unit of account. We reckon in pounds, use them to compute the total value of miscellaneous things; we juggle mathematically with them, multiplying prices, dividing values, adding costs and subtracting expenses from gross profits. The unit of account is the vehicle of our thoughts of value, price and worth. Without it, we should be mute and deaf in the economic section of the mind.

Money has been defined in many ways: among these, we may notice the one which declares money to be the agent of indirect exchange. This is an adequate definition only if we make the phrase include the abstract side, which it can barely do without straining the meaning of the words; and in any case, exchange is not the only activity which money makes more simple. But yet this definition has its use, for it makes clear a contrast with which we shall deal in the second chapter. Exchange, which, as the counterpart of specialising in production, has given the world its present richness in commodities, may be of two sorts, either direct or indirect. Direct exchange is bartering good for good, or "swopping", in the word of other years; and indirect exchange is the more advanced case

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of buying and selling, goods against money, money against goods, the money coming in between. If viewing a barter system as the antithesis of a monetary one, we can perceive points about money which their very familiarity obscures.

Often money has been given definitions narrower than the very wide one which we have adopted: some writers exclude the abstract side altogether; some stress the abstract side and include only coins and notes as the concrete manifestations, so excluding cheques and the like which they are compelled to refer to as money-substitutes. And some, like the late Prof. Cannan,¹ just refuse to define money at all, which saves a lot of trouble to those who are satisfied with hazy ideas.

There is an expression, "Money is as money does." Anything, in other words, which serves as money is to be considered as actually being money—a wide idea, directly opposing the narrower definitionists and their money-substitutes. But if we treat this expression as a definition, we get nowhere, for we ask at once: what does money do?—a question to which a multitude of answers can be given, involving many ambiguities and without achieving an exhaustive description of money's activities.

Finally, we may notice an important point, made with all his charming and lucid emphasis by Mr. Hartley Withers in his book, *The Meaning of Money*.² He points out that the word, money, standing all by itself, is sometimes used to mean the loan of money; two notable instances, he points out, are "the Money Market", where money is borrowed, and "the price of money", which means the rate of interest at which money can be borrowed. It is as if one described a lending library as a book-shop, and the subscription as the price of the book. Economy of words has led, as it often does, to superficial absurdity in the case of these two expressions, for "the Money Market" appears to mean the place where money is bought, and since it could be purchased only with money, the name suggests a ridiculous process. Similarly with "the price of money". We shall, in general, avoid speaking of the price of money, but the other expression is so common and well established that it would be unjustifiable to coin an alternative phrase.

¹ Edwin Cannan: *Money*, eighth edition, page 2.
² 1932, Chapter 7.

DEFINITIONS

§ III

The "real" and the "nominal". Income and capital.

Many terms of ordinary speech have special and precise meanings in economics; two of these we must elucidate forthwith, the adjectives "real" and "nominal".

"Real" denotes for us something concrete and actual; it refers to goods and services themselves. "Nominal" denotes the *value* of things; it gives a monetary expression whereby goods and services may be referred to; in fact, the word *monetary* may be used instead of nominal (though the converse is not true, since *monetary* has a wider meaning).

Thus real income is a stream of goods and services enjoyed over a period of time; nominal income is a monetary expression indicating the value of real income. When the word, income, is used alone, it may mean either the real or the nominal; usually the context makes clear which sense is intended, but Prof. Hoot, who means real income, and Dr. Coot, who means nominal income, are likely to misunderstand each other, especially if either sometimes uses the word in the other sense.

We are accustomed to speak of a man's income being £250 a year, and Dr. Coot, that champion of the common point of view, sees no difficulty in using the word in that sense. But the penetrating Prof. Hoot points out the £250 a year tells us only the value of the income; a man does not feed himself upon pound notes, he observes, nor clothe, nor house himself therewith; income actually consists of the food, clothing, etc., bought with the £250 a year, which is only the means, not the final object for which a man works. We clear up the dispute between the authorities by calling Coot's £250 a year the nominal income, and calling Hoot's stream of purchases per annum the real income.

The case of capital is worse: Prof. Hoot is interested in comparing the amount of railways, docks, factories, and other big, semi-permanent structures which different countries possess; so he writes a book, describing all these things as "capital". Dr. Coot, the City expert, writes, on the other hand, that the railways have "too high a capital". Now the Professor means what we shall call *real capital*, the stock of

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valuable things at a point of time. But Dr. Coot is in trouble. Thinking of how we distinguish between the authorities in the case of income, we ought to be able to say that what Coot means by capital is the monetary value of real capital at any point of time. Now it is perfectly true that he probably will use the word in this sense, but we shall also find him talking about the original amount subscribed by shareholders to start a railway company as its capital, or, as its *nominal* capital; what he often means by capital; and always means by nominal capital, is the monetary value of the company's assets *at the time when it was started*. This is an exceptional case, for Coot would speak (in the present tense) of a man's capital or a country's capital meaning the *present* value of their real capitals; only in the case of a company owned by shareholders does the nominal capital always, and the capital sometimes, mean the *original* and not the *present* value of the real capital.

We have, then, three distinct sorts of capital:

1. real capital, a stock of goods at a point of time (à la Hoot);
2. nominal capital, which means the contemporary value of an amount of real capital;
3. what we may call legal capital (always described in the financial press, however, as nominal capital), which is the amount on which companies pay fixed interest and dividends.

Thus we shall say:

1. that a railway company has a real capital consisting of a permanent way, engines, carriages, trucks and stations, and perhaps of docks, wharves, steamers and hotels as well;
2. that some rich man has a nominal capital of £10,000,000,
3. that the legal capital of a certain firm is only £1,000,000, although the present value of its real capital is more nearly £2,000,000.

We shall avoid speaking of the nominal capital of *companies*, so as to preclude confusion between the use of that expression by the financial press, when it means what we have called legal capital, and the strict sense in which the words

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mean contemporary value, as they do when applied to a man, a country, or the world.

We are accustomed to speak of £1 shares and of those having other original, legal values; the present (nominal) values, which appear when the shares are bought and sold on the stock exchanges of the world, are different; it would be a coincidence if they were the same. Some shares, not uncommon in the U.S.A., have no "par" value; they have a present value, but their legal value has never been fixed. A company having a legal capital consisting solely of shares of no par value would have a legal capital of zero. All legal capital is debt, what has been borrowed from shareholders and debenture-holders.

§IV

Money analysed according to its substance: copper, "silver", gold (commodity money), paper and nothing.

The medium of exchange is a genus which has several species. We can split it up in a very simple way according to the various things it is made of—an analysis according to substance. But if we were to analyse the money of every country throughout all time, the process would become outrageously long, so we will limit the analysis drastically and confine ourselves to England during this century. Then we find money to consist of five different things:

- 1. copper;
- 2. "silver";
- 3. gold;
- 4. paper;
- 5. nothing!

The first three categories, of course, are (or were) all coins, known collectively as the coinage; this is issued by the Royal Mint on behalf of the state to the Bank of England. These are the different coins of this century:

- 1. Copper: 1d., $\frac{1}{2}$ d., $\frac{1}{4}$ d.
- 2. "Silver": 5/-, 2 $\frac{1}{2}$ 6, 2/-, 1/-, 11d., 10d., 9d., 8d., 7d., 6d., 5d., 4d., 3d., 2d., 1d.
- 3. Gold: £1, 10/-.

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We have underlined the coins which are important to-day, and put dotted lines under the farthing and the threepenny bit because they are now only little used.¹ Very occasionally a crown (5/-) of Queen Victoria will be found in circulation. There is, every year, a special issue of "silver" coins, called maundy money, comprising a complete set, from a penny to a shilling, the threepenny bit, sixpence and shilling being the same as the ordinary ones; the issue is quite unimportant, and few people have ever seen the intervening coins. We have written the name of the second species in inverted commas, "silver", because, since 1920, the "silver" coins issued have been half silver and half base metal;² actually, pure silver (or pure gold) is too soft to make good coins, wherefore a very little alloy (7½%) used to be incorporated in the coins before 1920. Thus, we have now "silver" coins current, some of which are "real silver" (92½% pure) and some "fifty-fifty". A limited number of crowns and half-crowns was issued in 1935 to commemorate King George V's jubilee, but these are usually kept as mementoes so that they do not circulate.

No gold coins have been issued since 1914,³ and they ceased to circulate during the early months of the War. But there is one thing of the greatest importance to notice about the sovereign: the piece of gold of which it was composed was always worth exactly £1 as gold;⁴ it never varied while the sovereign was in circulation. We say that the metallic value of the coin was the same as its face value, and this was true only of the sovereign. The silver obtained from a shilling of 92½% fineness was worth, in 1914, only about 5d., and similarly with other silver coins; the difference between face value and metallic value is even greater in the case of the silver-alloy coins of to-day; the metal contents of copper coins have always been worth much less than their respective face values.

¹ Since these words were written, the new twelve-sided threepenny piece of George VI has been issued; it may be expected to come into more common use than its "silver" predecessor. We may class it as a copper coin since that metal more than any other gives its colour to the newcomer.

² A base metal is any metal except gold or silver; platinum and other very rare and precious metals would not be called "base", of course, but they are not used in making coins.

³ Certain gold pieces have been issued to commemorate the coronation of King George VI, but their issue price was far above their face value and they do not circulate.

⁴ If the coin was worn, the metal obtainable by melting was worth less, of course; two half-sovereigns weighed slightly less than one sovereign.

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A coin, whereof the metal content is worth the face value, is called a full-bodied coin; money of this sort is very rare to-day. If we consider all time and all space for a moment, however, we find that full-bodied money, which we shall call commodity money, is a very numerous species indeed; for commodity money includes, as well as full-bodied coins, the cows, furs, stones, shells and all the other things which have passed as money among primitive peoples. We must notice that commodity money first passed current because it was the one supremely important thing to the people of the community—important for food, for ornament, for defence or for some other purpose. But commodity money developed until it was wanted rather because it was money than because it furthered some simple need. We shall return to this subject in the third chapter. (Note: this term, commodity money, will always be used to mean full-bodied money; some writers have made it mean any sort of money except paper money and bank deposits, with some show of reason, but, on close analysis, this does not seem to be the truer use of the word.)

Our fourth species, paper, consists almost entirely of notes. In England, during the century, we find £1 and 10/- currency notes, which were issued by the Treasury (and very often called treasury notes) to the Bank of England, from 1914 to 1928, to take the place of the sovereigns and half-sovereigns, which were discontinued in 1914. These notes were superseded, after the Currency and Bank Notes Act of 1928, by Bank of England notes of £1 and 10/-. For long, the Bank of England had been issuing notes for bigger amounts, £5, £10 and higher,¹ but these are not important. Both treasury and bank notes are now called, rather loosely, government paper, which is a sensible name, however, because it is ultimately the government which decides how many notes shall be made.

There used to be a very small number of notes issued by a few small private banks, but these issues had all come to an end by 1921, and no new ones by private banks can be started. There are also travellers' cheques (which are more like notes than cheques), letters of credit, and postal orders; which are paper money of a special sort, but the first two are

¹ £20, £50, £100, £200, £500 and £1,000; there also exist some higher values used only among the departments of the Bank.

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not sufficiently important for discussion, and everyone knows what a postal order is and how it works.

Finally, we come to the mysterious, and shadowy fifth species which is made of nothing! But media of this sort have a name; they are called deposits.¹ Deposits are sums of money which a big bank (like the Midland or Lloyds) owes to us; they do not consist of anything tangible;² there are entries in the bank's books to say that it owes us so much, and we can make a payment to someone else by transferring part of what the bank owes to us to what it owes to him. This process is, of course, "payment by cheque"; in a very brief manner, on the cheque-form supplied by the bank for the purpose, we write instructions to the bank to pay A. Smith, Esq., £10, and sign our name on the front of the cheque; Mr. Smith then takes the cheque to the bank and "pays it in", signing his name on the back. The bank adds £10 on to the amount which it owes to Mr. Smith, and subtracts £10 from the amount which it owes to us, thus completing the transaction. The figures in the books of the bank have changed, but no tangible money has been moved. One may say, if it helps understanding, that deposits *consist of* the figures in the bank's books; they certainly consist of nothing else.

It is perfectly true that notes may be got from the bank in exchange for deposits. But the bank keeps only a small amount of notes; it would not have enough to go round if all the depositors went in one morning and made out cheques to self for the whole amount of their deposits, demanding notes in exchange. Actually, banks in England keep notes and coins totalling about one-tenth of the amount of their deposits.³

¹ There is a verbal ambiguity regarding deposits. They are of two sorts, namely, demand-deposits and time-deposits, which the banks designate respectively current accounts and deposit accounts. It is necessary to give notice, usually a week's notice, to the bank before drawing cheques upon a time-deposit account. Thus it is a question whether time-deposits should be ranked as money or as investments, capable of being transformed into money, of course, but not actually being money at any moment of time. Points of detail can be adduced in support of the view that all deposits should rank as money, the period of notice being neglected for this purpose; this is the more common classification and the one which will apply throughout this book.

² Yet we reckon deposits to be part of the medium of exchange, which we have called the concrete side of money, because payment is made by means of their transfer. It is an apparent verbal contradiction, which cannot be avoided.

³ This tenth, which is what the banks call "cash", is not all in the form

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Above, we used the phrase "payment by cheque", which makes cheques sound as if they were money; they are not. The cheque is only the instrument whereby the invisible money is transferred. When, therefore, we spoke in earlier sections of the chapter of cheques being money, we were not in fact correct. If we compare payment by note and payment "by cheque", the cheque itself is analogous to the action of handing over the note, not to the note itself; for when the note is put away in our creditor's pocket-book, he has been paid; when he puts away a cheque instead, he possesses only the means of getting paid, which will occur when the bank adds the amount on to his deposit and subtracts it from ours.

We may notice that there are other agents besides the cheque for the transfer of deposits: there are written instructions sent to the bank to "convert", money to someone else; a banker's order, which is like a cheque except that the sum named may be payable not once only, but once a year or once a month; and a special kind of cheque called a banker's draft which is a cheque drawn by one bank on another. We said that the essential thing about the medium of exchange was that it should be acceptable, that is to say, that it should circulate or pass round and round as payment from one man to another. Cheques and other agents for transferring deposits do not circulate in this way.

In the fifth species, the nothing-money, there is, however, another element besides deposits: we shall call it available overdraft, but for the moment we shall say only that it works as money in just the same sort of way as deposits do. (Available overdraft is explained at the end of the next section.)

§ V

The monetary groups: legal tender; currency; cash; token money and representative money; fiat money; bank money; substitute money; credit; overdrafts.

We have already, in speaking of our five English species, said something of three groups of money (coinage, commodity

of notes and coins, readily available in their tills; part of it consists of their deposits at the Bank of England; these can be withdrawn by the banks in the form of currency, however.

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money, and government paper). Now we require to define certain other groups. The groupings overlap since they have been made in order to emphasise different characteristics of money. Just as we can analyse the same collection of people in different ways, dividing them into French, English and German, or into male and female, or into children, youths, adults and aged, or into blonde and dark, so also can we divide money into categories which are sharply distinct, like male and female, or into categories which shade gradually into one another, like blonde and dark, or into groups whose characteristics require careful definition as in the case of nationality. The groups of money are of different degrees of distinctness.

Let us take as our first money group legal tender; here the line demarcating this sort of money is quite clear since, as the name suggests, it is laid down in law. Legal tender is the *lawful* form of payment which a creditor *must* accept in payment of a debt; other forms of money may be accepted if the creditor chooses.

The law was concerned with debts before it was concerned with money as such: it had early to decide whether a debt had been discharged properly; certain forms of money were decided to be a good discharge of debt. It is these forms of payment which are called legal tender.

In our five species of twentieth century English money, the third, gold coin, was unrestricted legal tender; the place of the gold coins was taken successively by treasury notes and Bank of England notes, both of which inherited the legal tender status of the gold coins. It does not matter how large is the sum owed: if we owed someone a million pounds, we could pay him (to-day) with a million £1 Bank of England notes. If he refused to accept payment in this form, and demanded a cheque instead, he could not force us, by going to law, to pay him in the way he required. Conversely, we could not force our creditor to take our cheque for £1,000,000 (or for any amount) if he did not want it; he could sue us at law successfully for a million pounds in Bank of England notes.

Part of species 1 and 2, copper and "silver" coins, creep into the legal tender category: copper is legal tender up to a shilling, and "silver" to £2. The reason for these limits is clear enough: it would be intolerable if a spiteful debtor were

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permitted to make large payments in copper in order to annoy his creditor.

Again, the fact that some forms of payment are not legal tender may be understood readily: this is so for the protection of creditors. We have decided that a cheque is not money, but it is, at least, a way of getting money and the most tangible thing there is in the shadowy species 5. But, if the law made "payment" by cheque a compulsory quittance of debt, a creditor would be liable to be defrauded by accepting a worthless cheque. Thus none of the instruments for the transfer of deposits is legal tender.

In other countries, laws of legal tender are much the same as in England. The notes of small private banks are never compulsory money; most other notes are. Sometimes a government agrees always to accept notes of a certain sort in payment of taxes; that has the effect of making them pass in circulation as easily as legal tender. Cheques and the like are nowhere compulsory.

The term currency means coinage and notes together, the whole of the tangible media of exchange except the three paper oddments, postal orders, letters of credit and travellers' cheques. This applies to all countries.

The term cash seems to have no less than seven separate meanings:

1. anything which is customary in payment—synonymous with media of exchange;
2. coins and notes—synonymous with currency;
3. coin only;
4. the smaller or subsidiary coins, particularly excluding any full-bodied money like the sovereign;
5. small change: any media of payment less in denomination than a certain (unspecified) amount (translating the French word, monnaie);
6. Chinese copper coins;
7. the currency in the tills of joint-stock banks plus their deposits at the central bank.

Thus, cash is a bad, loose word, and we shall avoid it so far as possible; in speaking of banks, however, we shall employ the word, in the last of the senses given.

We described the sovereign as (full-bodied) commodity

money! Every coin which is not full-bodied is a token, and, taken together, they are called token money. Sometimes, this term has been used to include, as well as coins, other media which are not full-bodied, but we shall not use token money in that sense. Full-bodied coins are now extremely rare, for gold coins have all but disappeared.¹ There have been multitudes of gold coins, full-bodied, in the past, however; furthermore, most of the silver coins of the past, more numerous and more important than the gold ones, were full-bodied, but the present-day "silver", and even present-day real silver coins (like the delightful Swiss five franc pieces), have all lost caste and become tokens. But base metal coins, with very few exceptions, have always been tokens.

Akin to token money is representative money, which means those notes which are freely convertible into full-bodied commodity money. There are no examples of this sort of money now in England, but Bank of England notes were of this sort until 1914; for a holder could take one to the bank and demand of right to receive sovereigns for the amount of the note brought. This sort of money represents commodity money, but since the latter has almost entirely disappeared, representative money has inherited the legal tender status, so changing its nature. We need the categories, token money and representative money in order to bear in mind why those sorts of media became readily acceptable in exchange and payment. From the point of view of acceptability, there is no real difference between the two, and we might say that the note is a paper token, or that the token coin is a representative note with the words and devices fashioned on metal instead of on paper. We utilise separate names, however, because the two categories are different in substance.

If we divide a nation into working and leisured—the line between the two is difficult to draw—some people will pass over with the flow of time from one group to the other, and some will die. Similarly, full-bodied coins pass over into the token class, and some in each class die. Base metal coins, on the other hand, have been leisured all their lives in the sense that they have never worked as full-bodied coins. It would seem, however, that some sorts of commodity money, the cows used as money in primitive societies for instance, could never

¹We may neglect, here as elsewhere, the gold coins of George VI.

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leave the working life and enter the representative class. In such a case there is no question of melting down to see what the content is worth. A cow is a cow, and it would seem that there is no more to be said. But one cow differeth from another in glory. Do lean kine degenerate into token cows, while only fat and well-favoured kine are "full-bodied" cows? Rarely so: the lean kine rather die a monetary death, from which better pasture, of course, may yield resurrection.¹ Notes, of course, were born rich, inherited legal tender status, and have lived all their lives in the leisured class, never working as full-bodied money.

Still considering why different sorts of money are acceptable, we must notice the group called fiat money. Money of this sort circulates because the state says that it shall be legal tender. The great bulk of fiat money is composed of notes, though token coins are also fiat money in a sense. An obvious example of fiat money was given when the government issued the treasury notes in 1914. But there are others besides government notes: we said above that when commodity money disappears and representative money inherits the legal tender status, then representative money changes its nature; it becomes, in fact, fiat money. But we shall observe that fiat money almost changes back into representative money if a country adopts the gold standard. Mr. J. M. Keynes, the great English economist, has called fiat money co-existing with a gold standard "managed money". Just what this means we shall find out in Chapter IX. To-day, all English notes are fiat money, and so, in a sense, is the whole of the coinage.

A larger money group is the one called bank money, which consists of notes issued by banks together with the ghostly species 5, deposits. We are thinking, when we use this term, of where the money comes from. If, however, we want to stress rather the manner wherein the great mass of money came into being, we speak of substitute money. The two may not be quite identical: bank money consists of deposits and bank notes; substitute money consists of deposits and all notes; if there are any treasury notes in existence, the larger group, substitute money, includes these, and the smaller group, bank money, does not.

And finally, what is credit? In the financial sense, credit

¹ See J. M. Keynes: *A Treatise on Money*, 1930, page 13.

is, strictly speaking, a belief in payment or in repayment.

As applied to shops, it is the belief that a customer who does not pay for purchases at once will do so later. As applied to banks, it is the belief that a customer who borrows a sum of money will return it later. By extension, the word has come to mean not only the belief but also the sum of money itself which the banker lends by reason of his belief or confidence in his customer. In England, from a third to a half of all deposits are credit. The banker lends nothing tangible; he merely enters a figure on the credit side of his customer's account and an equivalent figure in his records of loans to customers. His customer can by cheque transfer the credit-deposit to someone else, just as if it was an ordinary deposit without an equivalent sum entered in the banker's loan books; that is, the customer can make payment with credit just as well as with an unencumbered deposit. And if money is required in the form of currency instead, everyone supposes that the banker will have currency enough. How does the banker manage to lend this credit money? He CREATES it. Is there any limit to the amount he can create? There is: we shall see in Chapters V and XIV how the limit is reached. And how were the unencumbered deposits created? That will appear from the banks' balance sheets analysed in Chapter XIV.

In conclusion, the overdraft: we attach the name credit to certain media of payment in order to remember why they came into existence. From this point of view, available overdraft is identical with a credit deposit; available overdraft is credit. The difference between obtaining a credit-deposit on loan and obtaining an overdraft is this: the banker, in the second case, does not place a sum to the credit of the customer's account; instead, he makes a note on the account of the amount of the overdraft, say £100. Thereupon, the customer may, after drawing on the account until there is nothing left, *overdraw* the account until it reaches minus £100; he then possesses a minus quantity; that is, he owes the bank £100.

At a given moment, let us suppose the amount overdrawn to be £62; this amount (as well as the total permitted) is spoken of as the overdraft; the difference between the limit figure, £100, and the amount overdrawn is £38; it is this amount which we have called available overdraft, the part at any time remaining to be spent.

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We may notice that the bank charges interest to the customer on the whole of a loan; he charges interest not on the limit figure of an overdraft, but on the amount actually overdrawn.

We may now summarise the results of this chapter in a table. Our team of monetary groups occurs in column, on the left; our five species are shown as column headings together with a column heading for the reason why we want thirteen group names. The entries indicate to what extent the groups are composed of the different species and why each name is required. (See page 18.)

BOOKS

In general, there is no purpose in any reader, other than a philologist, investigating definitions different from those given in this chapter unless he wants to read the works in which they are contained.

For those who wish to read argument about the meaning of words, there is discussion of the definition of money in a difficult book, not suitable for those without a considerable knowledge of monetary theory, by Prof. L. von Mises: *The Theory of Money and Credit*, English Edition, Appendix B, page 434, and Chapter III, Section 1, and pages 28, 36 and 37. Although Prof. Mises defines money as the medium of exchange only, he finds no fault with Prof. Menger's concept of money as a price index (*ibid.*, pages 48 and 49).

For books containing narrower definitions, and in general, see books mentioned at end of Chapter II.

For money used in the sense of a loan of money, see Hartley Withers: *The Meaning of Money*, 1932, Chapter I. *The Meaning of Money* is simple and excellently written; the general reader and the inexpert should read it with great profit; likewise *Money*, 1935, by the same author.

Regarding income and capital, a whole book has been written examining the concepts in detail: Irving Fisher: *The Nature of Capital and Income*, 1927.

Concerning cheques and deposits, see D. H. Robertson: *Money*, 1935, pages 49 and 50.

The definitions of Section 5 follow the general lines of Mr. Keynes's well-known work, *A Treatise on Money*, 1930, a book of the greatest importance, but difficult. For a different treatment, of a simple and useful nature, see D. H. Robertson: *Money*, 1935, Chapter III, Section 1.

ANALYSIS AND GROUPINGS OF MONEY¹.

Media of Exchange.	I. Copper coin.	II. "Silver" coin.	III. Gold coin.	IV. Notes.	V. Deposits and available overdraft.	Why the names are required.
1. Coinage	All	All	All	None	None	Emphasises common form
2. Commodity money	None anywhere	None now anywhere	Almost all everywhere. Sovereign and others once U.K.	None	None	Shows circulation reason
3. Government paper	None	None	None	All now	None	Indicates ultimate authority
4. Legal tender	U.K. up to 1/-	U.K. up to £2	Unlimited before 1914	Unlimited	Never	Stresses power of State
5. Currency	All	All	All	All	None	Emphasises tangible form
6. Cash	All	All	?	?	Rarely	?
7. Token money	All	All now	Hardly ever anywhere	None	None	Shows circulation reason
8. Representative money	None	None	None	All in origin: not in U.K. now	None	Shows circulation reason
9. Fiat money	In a sense	In a sense	Strictly U.K. half-sovs. in a sense	All now	Never	Shows circulation reason
10. Bank money	None	None	None	Nearly all now everywhere	All	Indicates source
11. Substitute money	None	None	None	All	All	Emphasises function and origin
12. Credit	Not usually	Not usually	Not usually	Not now	Part	Stresses why exists
13. Overdrafts	None	None	None	None	Part (smaller than 12)	Indicates technique of creation

CHAPTER II

MONEY VERSUS BARTER

§I

The significance of the unit of account: standard of value and of exchange; common denominator for precision in calculation. Customary ratios in barter.

In the third section of Chapter I, we found Prof. Hoot speaking, in a somewhat academic manner, of real income, and Dr. Coot speaking in a more ordinary, common-sense way, about nominal income. Considerations regarding real things have their uses, but if we were confined to matter of this sort, to the exclusion of nominal considerations, we should find ourselves very severely limited.

Prof. Hoot, for instance, could find no precise way of comparing two men's real incomes; he could not give even a complete list of all the goods and services which a man consumes in a year. And this question of comparison is very important in many ways; upon it, to take one major example, depends the estimation of profit and loss, which is the guiding principle of capitalist enterprise. The process of comparison is made possible by thinking in terms of value; it could not be effected extensively in any other way. For these considerations of value we depend upon the unit of account.

We describe the function of the unit of account by saying that money serves as a standard of value and of exchange. The expression means only this: that we express the value of everything in *the same terms*, the monetary units. Actually, there is not one monetary unit for the whole world, of course, but many: pound, franc, dollar and so forth; but all these monetary units are linked up in the foreign exchange markets, wherein every national currency can be exchanged for every other.

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Without using a concrete medium of exchange at all, we could often effect exchange in a satisfactory way if we possessed a unit of account, capable of acting as a common denominator of value. A wants to buy an axe from B, who is willing to accept A's corn in exchange: if an axe is worth five knives and a knife is worth two measures of corn, then the exchange can be effected, an axe against ten measures of corn, by utilising the monetary unit, in this case a knife. If all prices are expressed in the same unit, then they can be related to one another directly; that is, the values of any goods or services can be related to each other.

The only alternative to a system of indirect monetary exchange would be a régime of direct, barter exchange. Apart from the great tedium of learning the value of every good in terms of every other, a system clearly inferior to the monetary one wherein all goods are expressed in the same terms, the decisive consideration must be urged that a system of fixed barter ratios, known to exist in simple communities, could not co-exist with economic progress. As methods of production improve, first one good and then another is produced more cheaply; therefore prices, determined, in the short run, by costs of production, must fluctuate; customary ratios of exchange cannot endure. Transition in value relationships is brought about simply and comprehensibly by price fluctuation; in a barter régime, fluctuations in value would produce grave dislocation and probably chaos. A vast barter market wherein all goods were dealt in at changing ratios is not a feasible system of exchange. It is worth a little space to point out the obvious conveniences arising from the use of money, undeniably a necessity in the modern world, in order to preserve some sense of proportion in the face of criticisms of money to be made in later chapters.

§II

Significance of the medium of exchange: barter requires coincidence; money generalises purchasing power, makes for full satisfaction in exchange. Barter tolerable only when exchange small. Divisibility of money: one-sided transfers.

Of the two chief functions of money, as unit of account and medium of exchange, the former is usually considered to be

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the more essential for modern society. But there is much to be said for the view that, in less advanced communities, the medium of exchange function is as important, if not more so; the conclusion depends upon the stage of development of the community of which we are thinking. For, to reckon in terms of a unit of account is to think in abstract terms, an advanced type of thought; thought about value is very much easier if the unit of account is identified with some concrete thing, like a shilling. Then, when we consider the value of some object, we can picture in our mind four shillings and can ask ourselves whether we would rather have the money or the object in question. Simple preference is a primitive habit of mind; it is a crude and fundamental way of thought, easily evoked among savage peoples and other small children. The mental transition to a unit of account comes later, aided by the earlier condition wherein the medium of exchange is paramount.

It is a well-worn truth that barter requires coincidence in exchange. The impoverished student who desires to sacrifice his gramophone in order to get books can, in his extremity, obtain money for the purpose; his problem is different in kind in a barter régime: he must then find someone possessing the books who will accept a gramophone. It is one of the great virtues of money that it *generalises* purchasing power: with money, a man can get in exchange generalised purchasing power wherewith to obtain anything which he himself may require. He can buy a little of the produce of a hundred different men if he wants to do so, or he can lay aside the money and save up for one big thing, to be given money in exchange is to be given the magic thing, which can be turned into any of the manifold things which money will buy; it is implicit in our definition that money has *general* purchasing power.

The use of money makes for full satisfaction in exchange. When we say this, we do not suppose, of course, that it is the same thing as saying that every indirect exchange, effected through the medium of money, is certain to be considered entirely satisfactory. Frequently, we buy things which disappoint us. All that is meant by the expression is that there is no reason why we should buy things which we do not want, whilst it would be difficult in a large volume of direct barter not to acquire things which we did not really require. It is true

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that we might limit the number of unwanted and half-wanted things we got by refusing to do a large volume of barter, but then, evidently, barter would become difficult to do, and it would be hard for us to get the things which we really wanted badly: The use of money solves this difficulty.

Barter is only tolerable, then, in very simple circumstances, as in the case where an agricultural community marches with a pastoral tribe, so that surplus wheat can be exchanged for surplus sheep at almost any ratio to mutual advantage; or as in the case where two warriors agree to specialise, the one making bows and the other arrows, in order to obtain a larger product for equal division. But as soon as division of labour develops to a considerable extent, money becomes necessary to facilitate exchange.

Readily divisible monetary units make small purchases easy; we may imagine a future society in which our petty requirements are made free to us; until those days dawn, we shall remain beneficiaries of the minor media of exchange for pennyworths of goods and services which it would be difficult to acquire by subscription.

Again, the medium of exchange serves us well in providing us with the means of giving gifts of a nature to be determined by the recipient. As a particular case of this process, we may observe the payment of taxes to the government, which provides what it deems necessary and takes what it needs for the purpose by buying or hiring its requirements with money raised by taxation.

§ III

= *Transactions over time: interim of indirect exchange may lengthen into saving; money as a store of value; conversely, deferred payments. Mobility of capital: saving and investment. Imperfection of money over time. Any durable good as a store of value.*

Money greatly facilitates transactions over time. A man building houses may wish to assure his supply of bricks in advance, so that he will not have to wait for delivery when one house is completed and he is ready to begin the next. Perhaps he has agreed to sell the one at present in building for a fixed

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sum, which will enable him to buy more raw materials; but he will not get this price until the present house is ready for occupation by the prospective owner. He therefore orders bricks for future payment and future delivery. What could he do if there were no money? The value of the sum of money agreed in a future contract could be assumed, with tolerable accuracy, to be stable; when there is confidence in the future value of the payment to be received, then dealing is easy. Dealing would not be easy if a man offered to his suppliers some ordinary commodity as future payment, because the value of the commodity might change significantly during the interim.

In the system of barter, there is no interval of time: the action which "sells" one thing automatically "buys" another in exchange. It is otherwise with money; for, when a thing is sold for money, the seller, receiving the money, may not at once spend it. A very small length of time *must* elapse; quite an appreciable one is very usual; and the interval may be, quite easily, of long duration. If this interval between receiving and spending money is months or years in length, we look upon it as something different from a short lag, and call it saving or hoarding.

If a man consumes less than he produces, then clearly he has something to save. What is the best medium wherein to store his savings? A man might hoard food, but that is difficult because much food is perishable. Money is certainly the best medium in which to keep savings, for a great part of ordinary saving is done with a view to providing against some unknown contingency. Its purpose is security. Because we do not know what trouble may arise, but only fear some untoward unknown, we do not, of course, know what sort of things it would be wise to lay aside for the rainy day. If we lay aside money, we shall have something which we can assume to be convertible into anything we may want when the rainy day comes. Money, then, is the ideal store of value for the man who provides against future trouble.

Investment was possible even in the days when saving consisted of "much goods laid up for many years". A rich man might pay food to employees, but few would possess savings upon a scale sufficiently large to make such a proceeding worthwhile. Small savings would tend to be nothing better than

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sterile hoarding, food and other things stored away barrenly for the future.

Money is more mobile in investment. Now, there are such things as Post Office savings' accounts, a network of Savings' Banks, and even the big Joint Stock Banks make provision, with money-boxes, for mobilising the smallest savings, shillings and pennies, for, when the banks get the money, they use it. An organisation for mobilising saving in the form of concrete goods could not be so efficient as this, so that capital (for saving is capital) would lie idle, which would be a waste of resources such as a poverty-stricken world cannot afford.

It is easy, in addition, to transfer savings from one security to another in a monetary economy: we simply sell our shares on the stock exchange, and buy something else. This is very important because it encourages investment. If a man felt that he would later have difficulty in finding a buyer for some shares, which he contemplated purchasing, it is likely that he would decide not to buy them; and if all shares were of this sort, he would perhaps prefer to keep the money in a box at home—sterile hoarding. Now it is very unlikely that a barter economy would permit of the existence of a highly organised stock exchange, so that, for this reason also, saving would be likely to take the form of hoarding rather than of investment. We shall not see until later in the book¹ how very serious this might be.

In conclusion, it is perhaps wise, at this early stage, to point out one of the characteristics of money which is, from some points of view, a serious shortcoming. The value of money is not stable over time. By the value of money, we mean what it will purchase; the value of money is the reciprocal, or inverse, of all prices. This value may go up or down. We think of the value (price) of other things as changing, but the value of money most people think of as fixed and unaltering. It is not so. The value of money changes, and for that reason it may prove a poor medium wherein to keep savings. But the value of money usually changes only slowly, while the prices of most other things have changed, during their history, often rapidly by large margins, and may do so again at any time. Hence, even in its shortcoming as a store of value, money is nevertheless superior to other articles.

¹ Chapter VII, Section 3, subsection (iii).

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When thinking of value over a period of time, we should remark that it is the durability of valuable things which links the values of to-day with those of the future; this means not only that present values will influence and help to determine future ones, but also that the values or prices which we expect to rule in the future will influence present ones. The durable thing which normally supplies this subtle link between present and future is, of course, money. But Mr. Keynes has observed¹ that any durable asset may possess this and other attributes of the highly organised money of modern times, so that we must not suppose that the link between present and future is something which is found only in an advanced society equipped with a fully developed monetary system.

BOOKS

Appreciations of the utility of money are to be found in practically every simple book on the subject. See in particular:

Hartley Withers: *Money*, 1935, Chapter I; *The Meaning of Money*, 1932, Chapter II.

D. H. Robertson: *Money*, 1935, Chapter I.

M. C. Buer: *Economics for Beginners*, 1927, Part II, Chapter I.

¹ In a very difficult book, *The General Theory of Employment, Interest and Money*, 1936 (Chapter XX, Section 1), of which we shall review some of the content in Chapter VIII.

CHAPTER III

THE ORIGINS AND CHARACTERISTICS OF MONEY

§I

The origins of money:

- (i) *The unit of account view: growth from customary ratios.*
 - (ii) *The medium of exchange view.*
- Both views held; probably both correct.*

It may seem surprising that there are more than a few words to say about the origin of money. The historical details regarding the first coins, indeed, could be stated simply; but we have defined money as the means of payment and of valuation, and the records of early payments are clouded by the mists of antiquity.¹ Views about the origins of money fall, in fact, into two groups: (i) the unit of account view, and (ii) the medium of exchange view.

(i). *Unit of account view.* Some authorities hold that, in the days of barter, shifts in the terms of exchange being very rare, relationships of value became rigid. A cow, for instance, might equal always ten bushels of corn, and so might two pigs. If the dominant thought in the minds of people in such a primitive society was whether they would have enough corn for the winter, they would become accustomed gradually to think of all their possessions as exchangeable in an emergency into so much corn: the cow would be worth ten bushels, the three pigs to five bushels each, the plough to twenty bushels.

"And that," a man might say to himself, "will see the whole family well into the spring, if I die of this wicked ague."

¹ Compare J. S. M. Keynes: *Treatise on Money*, 1930, Volume I, page 13.

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Now in a primitive society little change occurs; and people must have forgotten how many sacks a cow was worth, or how much hay ought to be given for a horse; but if people occasionally reviewed their wealth, expressing the answer in bushels of corn, they would keep in mind the value of everything in terms of corn, and so be able to calculate the value of other things in terms of each other indirectly.

There is no need to dwell further upon the value of a unit of account. In the case where a man died, and a portion of his goods became forfeit to his chief, the value of the estate could then be reckoned in terms of corn, and the amount of the forfeit estimated with tolerable accuracy, and paid in any convenient form. This procedure avoided such formidable difficulties as the chief becoming possessed of one-tenth of a cow, and one-sided transfers to tribal chiefs are not uncommon in payment of taxes and fines. But the importance of the development of a unit of account lies rather in the fact that it facilitated exchange, without which the fruits of specialisation could not be garnered.

Some writers have sought to show that among certain primitive peoples to-day the method of reckoning value in terms of some single thing is prevalent; the thing used is generally a cow or something of the sort, and they make the point with emphasis that the money-cow is used quite abstractly: the chief's tribute is paid in all manner of things; the cow serves only for the calculation. But this system, as must be expected, is not in use widely, and some of the instances given do not appear to rest on very sure evidence. We may say, however, that there is, at least, no contemporary evidence to disprove the unit of account theory of money's origin.

More important in support of the theory are the facts noticed above and in Section 1 of Chapter II: that it is quite natural and easy for simple people to think in terms of one good which finally acquires money's abstract attribute of serving as unit of account, and, secondly, that there is a very good reason for the idea of a unit of account to develop since it facilitates exchange.

What is there to be said against the theory? At the moment only this: that it assumes the existence of customary ratios—prices which never, or very seldom, changed. Is it likely that, if wheat had become the unit, men would continue to think

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of ten bushels as worth one cow during a year in which there was a bumper crop of wheat and a cattle plague? Or suppose there were a wet harvest and a record apple crop (which is not unlikely): what happens to the customary ratios? Apples are rotting unwanted on the ground and there is not enough corn for winter: do the customary ratios hold good? Surely it is more than doubtful.

(ii) *Medium of exchange view.* The second theory of the origin of money is the more widely held. Those who hold it maintain that some article gradually became a medium of exchange; that is, some good was accepted unquestioningly in exchange because the man accepting it knew that he in turn would be able to give it in exchange for what he wanted from some third party or for what he might decide later that he required. Rice is a good example: in the countries where that is the staple food, rice was in early times accepted in exchange for anything else, for everyone wanted rice. If a man should accumulate more rice than he wanted, then he was able to afford to exchange the surplus, let us say, for a pair of sandals; the sandal-maker would gladly accept payment in rice, for that was his staff of life. We may say that rice became money because it was generally acceptable; it had become generally acceptable because it was the staple food in places where under-nourishment rather than superabundance was the rule. We have already seen (in Section 4 of Chapter I) that all manner of things may serve as money. As Dr. Erich Roll says:

In the very beginning of indirect exchange we find, therefore, money consisting of a commodity which, in the given circumstances, possesses a special significance for the community: cattle for nomadic tribes, hides for hunters, etc. They are commodities which stand high in the estimation of the majority of the members of the community, and possess great value.¹

Now it might seem right to ask which of the two theories of the origin of money is correct. But is there really any conflict between them? It might well be that the first money in Africa was abstract money, the cow serving as a standard of value, while in India rice served as a medium of exchange before the days of abstract reckoning. If these two origins were independ-

¹Dr. Erich Roll: *About Money*, 1934, page 31.

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ent, and we may therefore accept them both, then it does not matter particularly which came first. Indeed, it may be permissible to imagine that the two processes grew up side by side: if parties to a bargain possessed excess stocks of the acceptable thing, then it could be used as a concrete medium for their transactions; if they did not have such stocks, then they had to calculate how their exchanges would have been arranged if they had had stocks of their money-good; they would, in the second case, be confronted with the more difficult task of reckoning barter values from agreed prices in terms of rice, wheat or whatever was their medium. But in times of fluctuating supply, these agreed values would be difficult to settle, and the concrete transaction, with the medium of exchange actually being given from one party to another, would be the rule.

§ II

The chief characteristic of money:

The state theory of money: legal approach. Knapp and Hawtrey.

The general acceptability theory: commercial approach. Widely held.

Contribution of each theory.

There is a theory known as the state theory of money, the essence of which is as follows:

- (i) what is essential in economic relationships is debt;
- (ii) money is what the state ordains shall be good quittance of a debt;
- (iii) the law, therefore, mentions money only in relation to debts;
- (iv) anything can be used as a medium of exchange, but that is not money.

Opposed to the state theory school of thought are those who define money as being whatever is generally acceptable in exchange or payment, without reference to any action of the state.

What is the dispute about? Is it about the definition of money? If it is, we might as well leave the matter there, for dispute about the meaning of economic terms is a futile occupa-

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tion. Actually, something slightly different is in question: it is not, however, a dispute about the historical origin of money. The dispute really concerns the most important characteristic of money, which may well form part, but is not necessarily the whole, of the definition. The state theory supporters say its power legally is to discharge a debt, and their opponents maintain that the all-important attribute of money is its general acceptability. That this was the real difference between the two schools of thought has tended to be obscured rather than clarified by the disputants: as usual, invective hurled from either side has served only to becloud the issue.

The state theory is associated with two well-known names, Knapp and Hawtrey. Knapp¹ went looking for a definition in the pages of history, and emerged with an idea culled from the Statute Book. But the idea, important in the rôle of description, ought never to have been dressed up to play the part of a definition. Mr. Hawtrey² has since rephrased the state theory with care and caution: for him, money has, as it has for us, a double aspect: in the first it is a unit of account; in the second, it is legal tender. The opponents of the state theory have sometimes been so insistent upon the wider description as medium of exchange that they have overlooked the importance of money's function as a unit of account.

The state theory is well described as the legal approach to money; it is the lawyer's view of money. The general acceptability theory is the commercial approach; it is the view of business men—and of the bulk of economists. If we choose the wider view and describe money as the medium of exchange, we can still incorporate the concept of a unit of account within our definition; for money is both of these things: its body is a medium of exchange, and its soul is a unit of account. This double concept owes a debt to both of the theories.

¹ Knapp: *Die Staatliche Theorie des Geldes*, 1905; English translation: H. M. Lucas and J. Bonar: *The State Theory of Money*, 1924.

² R. G. Hawtrey: *Currency and Credit*, 1923, Chapter II; *The Gold Standard in Theory and Practice*, 1933, Chapter I; and in other works.

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§ III

The general characteristics of money.

- (i) *What money ought to be:* portable, durable, homogeneous, recognisable, divisible.
- (ii) *Should money be intrinsically valuable?*
- (iii) *Merits of cheque-deposits.*
- (i) *What money ought to be.* What is the best sort of money? What are the characteristics of good money? As indicated in the summary above, it should have at least five important qualities.

Wherever there have been conditions needing money, men have required to go from place to place to buy and sell. Obviously copper coins alone would be too bulky to serve as currency: the first Roman coinage, indeed, was made exclusively of bronze, and the coins were so large that a rich man took his currency about in a cart.¹ In modern times, silver coins would be excessively bulky too. Pre-war gold coins were certainly small enough, but they were easily lost. Bank notes are generally the best, and these have a further advantage in that they can be sent by post easily and without registration.

Clearly, again, money should be durable: if wheat were used as money, a rich man might suffer loss because the rats got into his granary, or because it went mouldy; there would be unnecessary expense and inconvenience if special containers, like large-scale purses, had to be used by all and sundry to prevent the deterioration of the money-wheat. If we are thinking of coins, copper, silver and gold (with the very small admixtures of alloy which make them hard) are together very suitable. Lead would be too soft, and iron would rust, although, as Sir George Macdonald observes in his *Evolution of Coinage*: "There are but few of the more familiar metals that have not at some time or other been made to serve as material for coinage."²

¹ The aes grave, of which the other coins represented fractions, appears to have weighed about a pound avoirdupois. In early times there were many other examples of copper and bronze coinage, and some survived until recent times, notably in China. Observe also the following case:

"During the last century copper was actually used as the chief medium of exchange in Sweden, and merchants had to take a wheelbarrow with them when they went to receive payments in copper dalers." (Hartley Withers. *Money*, 1935, page 20.)

² 1916, page 37.

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Paper-money, too, can usually be kept in good condition, and if a note does become stained or torn, a bank will exchange it for a new one. If we keep a lot of ready cash, we usually put it in a fireproof safe, and, for the rest, ordinary care suffices.

But paper is not suitable for all denominations of money: for amounts so large as £1, 10/-, or \$1, it is better than coin; below amounts of this sort, paper becomes a nuisance. Many people will recall with distaste the dirty, crumpled and largely illegible fragments which circulated in Germany, France and elsewhere during and after the War: there were notes of 1 franc and 1 mark, of 50 centimes, 50 pfennige and even in denominations as low as 5 pfennige; in area they were commonly two or three square inches; and a pocketful of them was rather like a miniature waste-paper basket. It is worth notice, in passing, that the convenient device of the slot machine calls for metal money.

It is important that money should be homogeneous: one shilling must be as good as another if prices are going to mean anything precise. It would be a poor coinage of which shopkeepers had to scrutinise the specimens offered to them to see whether any clipped coins were included; these have caused serious inconvenience and irritation in the past. Nowadays, the clipper is defeated by the device of milling the edges of coins, so that even small parings would be readily noticed.

Fourthly, money should be recognisable. When the British Treasury issued £1 and 10/- notes at the beginning of the War, there were at first occasions when a stranger who proffered them was viewed with suspicion; and when the Bank of England took over the issue in 1928 and substituted its own for the treasury notes, the same thing happened on a smaller scale. It would not do to have (say) some sixpences large and some small so that shillings and sixpences could be confused easily; nor would it be suitable to have a considerable variety of devices on (say) a florin, because in that case forgeries and foreign coins would circulate more easily. Design, stamped on both sides, should be distinctive and with a certain amount of detail in order to hinder the forger.

A bad instance of money not being recognisable arose in France during the War: quite small districts (townships and arrondissements) issued their own notes; in neighbouring districts they were not accepted. Partly, the reason for this

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was the possibility of deterioration in the value of such notes, but, partly, it was simply the fear that, if all notes were accepted, a man would eventually find himself in possession of a proportion of forgeries.

Lastly, money should be divisible. Hitherto, in this section, we have been discussing concrete money: the question of divisibility touches money both in the concrete and in the abstract form. A unit of account must not be so large in value as to entail calculation of small values as sixty-fourths or seventy-fifths; what we really require is a unit of account whose simple fractions have special names and serve as subsidiary accounting units; a dollar, whose hundredth part is a cent, is a case in point. The dollar is a good unit, but perhaps a more convenient one for dealing in the sort of prices which prevail nowadays would have a value of about 10/-, with special names given to its tenth and hundredth parts so that they might serve as subsidiary units of account. The mathematics involved in dealing in pounds, shillings and pence renders the British system a poor one.

A medium of exchange should be small enough to admit of small purchases being possible; we do not need a coin so small that we can pay with it for a single pin, but we do want half-pence; by the test of experience, however, farthings appear to be smaller than we usually require, though other countries have coins smaller than a farthing (e.g. the Austrian groschen). Furthermore, it would afford unnecessary trouble if we had in circulation a coin equal in value to, say, 1/7 $\frac{1}{2}$; worst of all is a coin whose value fluctuates in terms of other coins, as can happen when full-bodied coins of both precious metals are current.

Adam Smith, who first discussed the question of divisibility, treats the matter in rather a different way: he says of the precious metals:

They can without loss be divided into any number of parts, as by fusion those parts can easily be reunited again; a quality which no other equally durable commodities possess, and which more than any other quality renders them fit to be the instruments of commerce and circulation.¹

(ii) *Should money be intrinsically valuable?* There is one

¹ Quoted by H. Houston: *The Fundamentals of Money*, 1935, page 5.

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further question regarding the part of money which we call currency: should it be made from intrinsically valuable metals? In a primitive society, gold and silver are to be preferred, because the value of these metals makes them readily acceptable either as coins or by weight. Again, the government of a backward country could not inflate a full-bodied currency.¹ But are these reasons decisive in the more important case of a developed country? There is a sound argument of monetary policy, with which we shall deal in Chapter IX, against having gold in circulation; apart from that, notes are, in general, more convenient than coins of high value; they are cheaper to maintain, and usually as difficult to forge. So far as inflation is concerned, we must make at the moment the assumption (not always true to experience) that the government of a developed country pursues a monetary policy (however foolish it may really be) intended and designed for the good of its nationals. If we accept notes, therefore, as preferable for the higher denominations of the currency of an advanced country, there remains the question whether subsidiary coins should have a metallic content approximating to their monetary value. In practice, this means whether a shilling should contain about 1/-'s worth of silver (and similarly in the case of other "silver" coins), for full-bodied copper coins would be inconveniently large. We shall see in Section 2 of Chapter IX that to maintain the silver content of our shilling at exactly the face value of the coin involves difficulties so great that most authorities deem such a policy imprudent. But is there any good reason why we should not have coins made almost entirely of silver, so long as we do not mind having to meet a slight increase in Budget expenditure, and so long as we do not fix the value of the content so near the face value that a likely increase in the price of silver will make it worth while to melt down the coins? The argument that productive effort which might find outlets in more useful ways would be directed to the mining of silver, in the event of a greater demand, is not a sound argument in a world miserable with unemployment. But it would, of course, be difficult to oppose those who, while lamenting the present wretched state of our "silver" currency, maintained that every possible penny available in the Budget should be spent on the housing or the health of the people.

¹ For a proper explanation of inflation see Chapter XI.

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(iii) *Merits of cheque-deposits.* The bulk of what we have been saying concerns currency rather than money in general: that leaves out of account bank deposits, with which we will now deal. Bank deposits, by far the most convenient form of money for large payments, are portable up to any amount, in the sense that it is easy to carry a cheque-book wherewith to assign them to someone else; consisting of nothing more than entries in the books of a bank, they are the most durable of all forms of money, since they possess no concrete embodiment to be stolen or destroyed; deposits are entirely homogeneous; they are more readily divisible than any form of currency, in the sense that cheques can be made out for their transfer to any amount, pounds, shillings and pence—though not, indeed, for halfpence. And finally, they are not intrinsically valuable, since they have no intrinsic form. On the whole, then, they seem to be an ideal form of money, but we have omitted to comment so far on the obvious fact that they cannot be recognised at all; there is nothing to see; we do not even go into the bank and observe the record of their existence in the ledgers, and a pass-book is not a sufficiently certain guide as to the state of a person's account, since it could scarcely be kept up to date from moment to moment, and since it would be, in any case, too easy to forge. The trouble about the cheque-deposit system is that it requires the payee to place trust in the drawer. There are, of course, many cases in which that confidence will be forthcoming without the drawer of the cheque being personally known to the payee: the case where a man (acting for himself or for some organisation) is evidently in such a position that he would not issue a worthless cheque for the sake of a few pounds; where the issuer could have no personal advantage in drawing a worthless cheque; or where a man will not obtain what he is paying for until after the cheque has had time to be cleared—a case covering subscriptions in the widest sense. But there remains the fear of the worthless cheque, whether issued carelessly or with intent to defraud. This uncertainty, it would seem, will always limit the displacement of currency by the cheque-deposit system; a further limit is imposed by the fact that it would be a nuisance to make small payments, in shops, for instance, by writing out a cheque. The fact that cheques do not as a rule circulate, but pass from the payee into cancellation via the banks, is an additional drawback. A certain

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amount of circulating currency will be necessary for a long time to come. Cheque-deposits cannot serve as the only form of money; for the great range of payments, however, they are the most convenient form.

BOOKS

1. The unit of account view is particularly associated with the name of Gustav Cassel (*Theory of Social Economy*). A short and lucid statement largely along these lines is contained in Henry Houston: *The Fundamentals of Money*, 1935, Chapter I. The medium of exchange view of money was observed by Adam Smith and briefly by practically every writer since. L. von Mises (*The Theory of Money and Crédit*, 1934, Chapter I, Section 2) overstates his case. There are a few brief sentences very much to the point in R. C. Mills and E. R. Walker: *Money*, 1936, Chapter I, Section 3, and in Hartley Withers: *Money*, 1935, Chapter I.
2. State Theory: Knapp (*The State Theory of Capital*, 1924) is very long. A concise statement is to be found in R. G. Hawtrey: *The Gold Standard in Theory and Practice*, 1933, Chapter I. The General Acceptability Theory is to be found in many works; see Hartley Withers: *Money*, 1935, Chapter II, and D. H. Robertson: *Money*, 1935, Chapter I, Section 2.
3. A useful and very brief account of what money ought to be occurs in M. Briggs and P. Jordan: *Textbooks of Economics*, 1935, Chapter XVII, Section 6, and in D. H. Robertson: *Money*, 1935, Chapter I, Sections 3 and 4. See also N. Crump: *First Book of Economics*, 1934, Chapter VI (first part).

The question of whether money ought or ought not to be intrinsically valuable is better left until the reader has some knowledge regarding the value of money, the gold standard and bimetallism (see below, Chapters VI, VII, VIII, IX). See also R. G. Hawtrey: *The Gold Standard in Theory and Practice*, pages 15-19 and 95-96.

Concerning the advantages of cheque-deposits, see M. C. Buer: *Economics for Beginners*, 1927, page 153, and F. W. Taussig: *Principles of Economics*, 1927, Volume I, Chapter XXIV, Section 5.

CHAPTER IV

SOME NOTES FROM MONETARY HISTORY

In this chapter, we are not going to attempt a careful outline of the history of money, and we shall certainly not try to compress into a small space a lot of events and dates (often of little value as a guide to modern conditions); but we shall touch lightly upon a few facts suggestive of the progress hitherto achieved in the development of money.

§I

Coinage:

The precious metals. Early coinage: difficulties of: forgery; sweating and clipping; picking and culling. Gresham's Law. Brassage and seigneurage. Re-coinage and communications. New issues as light as current coins. Official debasement: calling down. Free coinage.

In Section 3 of the previous chapter, we observed how gold, silver and copper serve well as substances for money; in early times, copper alone was not very suitable because only metals of high intrinsic value were readily acceptable for payments of large size. There seems, indeed, to have been an inflationary period in the history of Israel when silver ". . . was nothing accounted of in the days of Solomon",¹ but such a state of affairs was unusual; both silver and gold, either separately or together, were used as media of exchange in early civilisations, and fell as glittering spoil to enraptured barbarians preying upon those whom comfort had rendered weak.

During the Dark Ages which followed the collapse of the Roman Empire, and in early mediæval times, silver became predominant, especially in Western Europe. This was due

¹ 1 Kings x. 21.

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partly to the unsettled condition of the times which chased gold into hoards, and partly to the fact that the supply of gold failed to keep pace with a growing demand, so that its value increased in terms of other goods to such an extent that gold coins of suitable value would have been too small in size for general circulation; this state of affairs lasted at least until the end of the Middle Ages.

Coinage seems to have had at least three separate origins: in China, in either Lydia or Ionia, and in India. In China, it appears to have begun early in the eleventh century, B.C.;¹ in Lydia, according to Herodotus, at the start of the seventh century, B.C.; and in India in the fourth century, B.C.¹

But, as Mr. Keynes has pointed out,² a more important landmark in the history of money had been passed long before, when the state made its first incursion into monetary matters and defined the quantity and quality of precious metal which should correspond to the units of account in use. The actions of the state in the monetary field, and the consequences of those actions, will occupy a considerable portion of the remainder of this book.

Early among the monetary difficulties of the state were the abuses of the system of coinage. The reasons are clear for using coin rather than a precious metal measured, for the purposes of transactions, by weight: among honest men, time was saved and trouble in identifying genuineness; a stronger reason, however, for superseding the older method lay in the possibility of sharp practice which it offered, both in respect of quantity and of quality. But the difficulties of coinage have been formidable, and their satisfactory solution has been found only in comparatively recent times.

The clipping of coins, which means the paring off of small pieces of the valuable metal, started early in the history of English coinage; by mediæval times, this abuse and the kindred malpractice of sweating (washing coins in acid to remove part of the metal) had become serious factors preventing the growth of commerce.

Not only did the clipper himself damage the coinage; he also paved the way for his fellow, the forger, whose activities would have been narrowly circumscribed in trying to counter-

¹ See Sir George Macdonald: *Evolution of Coinage*, 1916, page 9.

² J. M. Keynes: *Treatise on Money*, 1930, Volume I, page 11.

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feit sound coins. The process of cutting the edges of coins like the surface of a file, which is known in this country as "milling", was first used in England in 1561, but was abandoned for trivial reasons, and not reintroduced until 1662. This, together with other improvements, reduced the mal-practices to negligible proportions.

Another abuse was checked at the same time: merchants making large payments, especially to creditors abroad, could not, or, for the sake of their good names, would not, pay by tale (counting the coins) with the light money current: that is to say, if a merchant owed two hundred florins, he did not proffer two hundred one-florin pieces, because these would, in general, be deficient in metal content; instead, he multiplied the weight of precious metal supposed to be contained in one florin by two hundred, and weighed out metal accordingly; actually, the metal which he used would probably be the worn current coins, of which he might require perhaps two hundred and thirty-five properly to discharge his debt. But small payments, especially those to men of little consequence in the mercantile community, could be made by tale; ill-feeling was aroused, but not without a motive, for merchants selected the light coins to pass by tale, and reserved the newer and heavier ones for their payments by weight and especially to melt down for export.

This practice, known as "picking" and "culling", was too profitable and too hard to detect for successful prohibition, and it was realised gradually that the remedy lay rather in improving the coinage, and in maintaining it at such a standard that the illicit profit could be made no longer.

It was not, of course, the shady profits made from the currency which angered the royal ministers so greatly, but the fact, only slowly realised, that new full-weight coins put into circulation promptly disappeared in the melting-pots of the silver exporters, so nullifying all attempts to improve the coinage.

Comprehension of this process was, by Tudor times, enshrined as a principle, unjustly attributed to Sir Thomas Gresham, an Elizabethan merchant and government agent, and known as "Gresham's Law". The principle was expressed in the terms: "bad money drives out good, but good money cannot drive out bad"—the bad being the worn and clipped,

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and the good being the full-bodied money. But Gresham's Law has a wider application, as we shall see in Section 2 of Chapter IX.

Not all the gains from the coinage, however, were illegally made, for the government itself was able sometimes to reap a profit. The right of coining the precious metals belonged to the state,¹ which very reasonably charged the cost of minting to those who brought their metals to the Mint; but, over and above this charge, called "brassage", the sovereign frequently exacted a further payment, "seigneurage",² the amount due to the lord (seigneur) for allowing minting facilities. At various times in different countries, seigneurage was raised to exorbitant heights, falling as a tax upon those who required their metals minted. The importance of it lies not in its success as a tax, for it was a failure, but in the incidental effect that it kept metal away from the Mint, so assuring a serious deterioration of the coinage by honest attrition and by forgery, clipping, sweating and culling.

Once in a long while, the state would try to mitigate the evils arising from bad currency by ordering a total re-coining: the old coins were to be delivered to the Mint by a specified date; and there was every reason why they should come in, for not only would their owners receive better coins instead, but also the legal tender status of the worn coinage might be taken away. Now it was impossible to collect all the old coins in circulation before issuing the new ones, since this would leave the country without the necessary medium of exchange for a period which would be long because of the slowness of communications. So the attempt was made to issue new coins as fast as the old ones were taken in, which was an expensive operation, possible only to peaceful kings whose treasuries were full. And, of course, the attempt failed, because the new full-weight coins disappeared from circulation as fast as the Mint produced them, by reason of remelting or export; the sharp-witted and unscrupulous goldsmiths and silversmiths particularly profited at the expense of simple kings.

But even in the Middle Ages, the power of the state to regulate the quantity of precious metal in a coin was called in to remedy the chronic monetary debility: new issues were made

¹ Except in pre-Revolutionary France.

² The term seigneurage (variously spelt) has often been used loosely to mean brassage, or to mean seigneurage proper plus brassage.

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of coins approximately as light as the average coins current; this strategy usually proved reasonably successful, and it had the added advantage of being less costly to the state.

Indeed, lighter issues opened up an unsuspected source of revenue for needy monarchs,¹ who issued coins containing a proportion of base metal—a harmful method of raising money, known as debasement. The proportion of base alloy in coins was wont to grow in this way until the conditions of the coinage reached the point where drastic remedy was urgently necessary: the remedy found was a combination of re-coinage with an official "calling-down". When coins were called down, they were made by royal proclamation to pass in payment at an amount less than their pre-existing face value, and they were accepted for re-coinage by the Mint at, or often at rather under, the value of their metal content. Citizens were liable to wake up one morning and find that their sixpences had become four-pences by royal proclamation, and in any case those of the old coins, which continued to circulate while re-coinage was in progress, would command only the value at which the Mint and the tax-gatherer accepted them (since there was at the time an excess of them in circulation).

This expedient was adopted successfully by Queen Elizabeth, to whom it actually yielded a profit, but it is doubtful whether the coercive organisation necessary to ensure success could have been created in earlier times.

But improved currency did not remain good; by the middle of the seventeenth century, further remedial measures were necessary in England. In 1666, the coinage of both gold and silver was made free, no brassage nor seigneurage being charged—a measure designed to ensure an adequate supply of full-weight coins of both metals. Actually, the measure provided only the gold coins, for, at the market prices prevailing, it paid to take gold, but not silver, to the Mint.

After the Napoleonic Wars, official recognition was given to a state of affairs which had existed for fifty years: free coinage of silver was discontinued, and smaller silver coins, whose face value was greater than their metallic value, were issued, with the property of acting as legal tender up to amounts not exceeding £2 (so becoming token coins). England had adopted the gold standard, an example which all impor-

¹ Notably Henry VIII in England.

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tant countries were to follow during the latter part of the century.

§ II

The origins of credit:

- (i) *The coming of the bank note.*
- (ii) *The coming of the cheque.*
- (iii) *The treasury note.*
- (iv) *Bills of exchange.*

(i) *The coming of the bank note.* Credit money developed as an attempt to bring relief from the risk and irritations inherent in coin dealings. Some credit institutions were known in the ancient Assyrian empire, and the Greeks and the Romans developed systems similar to some of our modern devices. In the Dark Ages, such refinements disappeared, but, by mediæval times, the same processes developed again in the centres of commerce.¹ England, which was not of great commercial importance until later, did not develop banking, as distinct from extortionate usury, until the seventeenth century—a time of great dislocation of the coinage. Here, goldsmiths and silversmiths sought deposits of coin, at first for purposes of culling. To begin with, their deposits came in large part from persons, called scriveners, whose profession it was to keep the accounts of merchants, and to take charge of large amounts of their coin. The scriveners, concerned only with the tale of the coins, were not averse from lending their clients' funds to goldsmiths who offered interest as an inducement. Gradually, the scriveners disappeared, because merchants began to deposit directly with the goldsmiths for the sake of the interest. But scriveners had not been the only source of goldsmiths' deposits; there were also those who were willing to deposit their money without interest, at first even paying a safeguarding charge to those whose strong-rooms and guards gave a welcome feeling of security.

The goldsmiths gave receipts to their depositors; soon the necessity was circumvented of going to the strong-room, taking out the money, and handing it over to someone else: the space on the receipt for the owner's name was left blank, so that a

¹ Notably Florence, Venice and Amsterdam.

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merchant could fill in his creditor's name; this expedient saved valuable time. An improvement followed quickly: instead of leaving the space on the receipt blank, it was filled in with the word "Bearer", in order that *anyone* who took the receipt to the goldsmith could obtain the coin.

This was better than the blank receipt, since it could pass in payment between any number of people, and not merely two. The receipt had become a bank note and the goldsmith a banker. For the goldsmith found that his notes circulated, on the average, for a considerable time, so that a large quantity of other people's money lay always in his vault: it had become safe to issue notes for an amount greater than the quantity of coin possessed, giving out the additional notes not as genuine receipts but as loans at interest, for the goldsmiths counted on being able to cash the additional note-money thus created with somebody else's coin. Since no one would suppose that the wealthy goldsmith, whose notes he held, would not be able to encash them when required to do so, there was no reason to doubt the value of this convenient paper. The system grew: the mercantile world benefited doubly: the genuine depositors, because the goldsmiths paid them a small rate of interest on their deposits, and others because they were able to borrow at a higher, but not an excessive, rate what served as well as hard cash. All benefited from the fillip given to business by the new money. And the goldsmiths gave up their former craft to concentrate their energies upon the more lucrative activity of creating credit to lend at interest.

(ii) *The coming of the cheque.* Notes were not the only form of credit: about the same time, the cheque-deposit system began. A merchant, instead of making payment with a goldsmith's receipt-note, wrote a letter to his banker asking him to pay his creditor a stated amount; such a letter had the advantage that it could require payment of any odd amount, whilst notes were commonly made out in round figures. Soon the letter was phrased in a very few words, and later it came to be written on forms supplied by the bank in a cheque-book. And, instead of himself going to collect the money from his debtor's bank, a payee arranged that his own bank should take charge of the cheque, and collect the money due.

Instead of making a loan in the form of notes handed to his

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customer, a banker was able to loan him a cheque-deposit, either by crediting his account with a specific amount or by making available overdraft facilities. During the nineteenth century, the latter method surpassed the former in importance.

(iii) *The treasury note.* Bank notes are not the only sort which circulate as money: the government of a state can also issue notes, either with the guarantee that it will give coin in exchange to any note-holder who requires it, or without such a guarantee; these two kinds are called convertible and incon-vertible notes.

Now to print a large quantity of inconvertible paper money, wherewith to meet their various expenses, might seem to bankrupt monarchs to be an easy salvation—far more efficacious than tampering with the coinage; but, in fact, it has proved usually to be a disappointing expedient, and one so transparently fraudulent as to be difficult to put into operation. Nevertheless, government issues, known as treasury notes, are not uncommon, though there had been few before the French Revolution.

(iv) *Bills of exchange.* Finally, there is an instrument called a bill of exchange. This might be described as the reverse of a cheque, in the sense that it is drawn by the seller on the buyer. It is sent to the buyer accompanied by documents which will give him possession of the goods sold. When the buyer receives it, he signs it, undertaking thereby that he will pay it, for these bills (or drafts, as they are also called) are commonly payable not at sight, as a banker's note is, but after a considerable lapse of time, so that the buyer may, in the meanwhile, manufacture and resell the goods, or retail them. The lapse of time is now frequently ninety days, and during this time, which is called the usance of the draft, the buyer pays interest on the amount of the bill.

Some drafts entitle the buyer to take possession of the goods when he accepts, that is, when he promises to pay on the due date by signing the draft; these are known as D/A drafts, "D/A" meaning "documents against acceptance". Other bills are drawn D/P, or "documents against payment", so that, in this case, the buyer actually pays for the goods before he gets them.

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Now what are these documents which entitle the buyer (or "drawee") to obtain the goods which he has ordered? They are commonly a bill of lading, an invoice and an insurance policy. The bill of lading is a form of receipt given by a shipping company to the owners of goods sent by sea; the invoice is a list of the goods with their prices stated and sometimes a list of the charges incurred in sending the goods to the buyer, though sometimes a seller will have quoted a price inclusive of all shipping and insurance charges and occasionally of interest charges as well; the insurance policy is to cover the risk of loss or damage in transit. The buyer needs the bill of lading in order to be given the goods when they arrive at the place where he lives; the invoice tells him exactly what has been sent without the need of undoing the packages, and also indicates the value upon which he will have to pay duty if the goods are subject to an import tax; the insurance policy is sent to him so that he may claim, if necessary, and have the damage estimated by the insurance agents who are to be found in all ports.

This is the typical bill: it is a means of payment which was specially devised long ago, in classical times, for international trade. A London merchant, when he draws a bill, usually takes it to his bank, which buys it from him at a discount, that is, at slightly less than the face value, for the bank is virtually making him a loan with the draft as security that it will get paid back, and for the loan it must have interest: discount is only a name, then, for interest calculated in a special way.

When the bank gets the bill, it sends it to its branch in the place where the buyer lives, and it is this branch which actually presents the draft to the buyer for acceptance. If the bank does not possess a branch at the place in question, nor a "correspondent" who does such work for it, then it must sell the draft—at a slightly smaller discount—to another bank which does possess a branch or a correspondent there.

If the buyer should refuse to accept the draft, which is a rash thing to do without reason for those who value their good name, the drawer of the draft (the seller) becomes liable to reimburse the bank. Similarly, if the buyer has accepted the draft (on D/A terms, particularly), but finds himself unable to pay on the due date. But if the holder of the draft is a second

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bank, which bought it from the original discounting bank, then that first bank must reimburse it, so that the second bank is very certain of getting its money back. Possibly, however, the first bank may lose: it demands repayment of the refused or defaulted draft from the seller, but the seller may possibly go bankrupt. It is because the security of bank number two is better than that of bank number one that the second cannot secure so large a discount as the first can get.

Not all bills of exchange arise from international trade. Some are what are called finance bills, which have no documents attached because they do not cover the movement of goods. Sometimes finance bills are quite sound instruments drawn to settle some outstanding debt. But finance bills have a bad name, for they represent, too often, the raising of liquid funds by a firm which would find difficulty in raising money by any other method; this has been done often by a firm drawing on one of its branches (a process known as "pig on pork"!), hoping that it will have money available to send to its branch by the time that the bill is due for payment.

At one time, bills of exchange were common in the internal trade of England, but, since the middle of last century, the cheque-deposit system has gradually displaced them. They are still, however, common in France, where the cheque-deposit system has begun only recently to develop to any extent. During the early days of the Industrial Revolution, banking facilities were not available to a sufficient extent in Lancashire and Yorkshire where the early development of industry occurred so rapidly. These, bills of exchange used to pass from hand to hand with great readiness, forming, in fact, the most important medium of exchange; in that time, therefore, they must be classified as money, but the ordinary bill of exchange of the present day, whether internal or international, must be looked upon rather as a short-dated security (an investment soon to be repaid); a bill is not generally acceptable in payment, nor freely circulating among the public, so that we cannot call it money.

The bill of exchange, it has been said very well, forms a bridge of time and space: it enables payment to be made at such time that the buyer may have been able to resell at least a part of the goods covered by the draft, so putting himself in funds, and it enables payment to be made in his own country

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and in his own currency for goods brought from abroad. The seller, too, gets what he wants by discounting: payment at once in his own currency. And the banks get their interest.

BOOKS

1. Concerning coinage, for a long account see A. E. Feavearyear: *The Pound Sterling*, 1931, Chapters I, II, III, IV, or Sir George Macdonald: *Evolution of Coinage*, 1916 (the whole book is not very long).

For shorter accounts, see Henry Houston: *The Fundamentals of Money*, 1935, Chapters II and III, and M. C. Buer: *Economics for Beginners*, 1927, Part II, Chapters I and II.

2. Concerning bank notes and cheque-deposits, see A. E. Feavearyear: *The Pound Sterling*, 1931, Chapter V, and Henry Houston: *The Fundamentals of Money*, 1935, Chapter VII, and R. C. Mills and E. R. Walker: *Money*, 1936, Chapter I, Section 6.

Concerning treasury notes, much will be said later in this book, especially in Chapters XI and XII where further reading will be suggested.

Regarding bills of exchange, see especially Hartley Withers: *The Meaning of Money*, 1929, Chapter IV, or M. C. Buer: *Economics for Beginners*, 1927, Part II, Chapter VI, or N. Crump: *A First Book of Economics*, 1934, pages 30-33.

CHAPTER V

MONETARY INSTITUTIONS: PRELIMINARY SURVEY

§1

Early banking. Reasons for development: credit, sound currency, and safety.

We may define a bank as a firm for the safe deposit of currency and for the granting of credit. For banks grew during periods when robbery was a formidable anxiety to those whose wealth to a large extent took the form of precious metal. In modern times it is easy to forget that a town was once attractive to rich people on account of the security which it offered against violence, and that international trade was made hazardous, and sometimes too hazardous to be worth while, by successful pirates. Above all, it was the precious metals which were dangerous to transport, and we find cities long ago building fleets to cope with the unnatural dangers of the sea, and introducing within their own communities drastic laws and institutions enshrining the principle of the sanctity of property.

The granting of credit began before the pages of history can be read clearly. It was the ancient pagan temples which began a practice which should not be regarded as only mercenary. Credit was given, for instance, in Babylon about the year 2000 B.C. for the purpose of providing a man with the necessities of life while his crops were growing, a farm credit upon which interest was charged. No doubt the system was abused, but clearly it enabled production to take place in circumstances wherein it would have been impossible to borrow from any other source. The mystic associations of the lender en-

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hanced the probability of repayment without legal compulsion, and the temporal resources of a particular divinity no doubt affected his prestige as a god.

• Greek temples were often active in giving credit, which was really rather a sensible arrangement, for their priests were shrewd men, expert in judging character, which was very important at a time when repayment depended largely upon the personal integrity, and not upon attaching the possessions, of the borrower.

In early Roman times the same procedure existed, but it is at Rome that the lay banker emerges clearly in later times, perhaps as a corrective to abuses on the part of those who could claim divine justification.

It is surely no accident that ancient coins bore the image of a god; coining was a prerogative of sovereignty, but the men who were commissioned to strike the coins fashioned upon their surfaces what seemed appropriate; there seemed nothing incongruous in associating the deity with money; it appears reasonable to go very much further than this and say that the two were closely linked together in men's minds.

In the Dark Ages, borrowing practically ceased except at Byzantium, but the Templars certainly practised forms of banking, and in the year 1148 there was founded a large and important bank at Genoa, called the Casa di San Giorgio, whose business became well developed. Commerce, local and at long distance, grew again in the Middle Ages, and banking functions grew with it—notably in the Italian cities and the Hanseatic towns. But the scope of banking was not large while the bulk of international trade was transacted at periodical fairs. In 1609, the Bank of Amsterdam was founded, that city being then one of the foremost commercial centres; it stimulated trade considerably by accepting all currency brought to it, crediting the depositor with an account in its own private sort of marks after assaying the money received; the great trade of the city was done in the Bank's marks. In every way, the Bank of Amsterdam offers a contrast with the early goldsmith-bankers of England: it was a municipal undertaking; they were private business men; the Bank did not make loans, which became the chief part of their transactions; one of its chief services was to give a guarantee, in the name of the city, of the safety of all money left with it; the goldsmith-bankers who lent large sums

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to Charles II were unable to get them back, so that their individual credit was ruined and many of their depositors ruined also. Finally, England saw the formation of a large joint-stock bank, the Bank of England, which, in some respects, resembled the Bank of Amsterdam.

We may say, then, that banking had a threefold origin: the granting of productive credit, the provision of a sound medium of exchange (achieved by avoiding the use of the poor coinage generally current), and the safeguarding of the precious metals.

§II

The Bank of England: foundation to finance war against France. Present functions: note-issue; government bank; bankers' bank; gold reserve; exchange control.

When James II fled to France in 1688, he left some pretty problems and a lot of debts behind. The reputation of the monarchy in financial matters was low, and the royal credit was not improved by the opinion of many that William III was little better than an adventurer with the expensive habit of warfare. From a group of wealthy merchants of the City of London, however, the new King managed to borrow upwards of a million pounds wherewith to take part in the League of Augsburg, formed to fight Louis XIV of France. Interest was paid on the loan at 8% per annum; but it was not the considerable rate of return on the King's borrowings which attracted the merchants so much as the exclusive right, which was permitted to them, of forming a joint-stock company with limited liability for the purpose of banking. The company was styled the Bank of England; this was not an inappropriate name, for the new bank was given the government's account to keep and manage; it also gave advice concerning the loan transactions of the Crown.

As well, William III borrowed from the public moneys which were never intended to be paid back. The old Stuart debts were added to the new loans to form the modest beginnings of the National Debt.

The Bank of England paid interest on its notes, which

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caused indignation on the part of the goldsmith-bankers, who complained that their deposits were attracted away. More formidable opposition arose from political causes: the Bank had been founded by supporters of King William, the Whigs; the opposition Tories therefore regarded the Bank with hostility, and when they obtained power, sought to set up the Land Bank as a counterblast. But the Land Bank failed, and the Bank of England was left as the only large bank issuing notes; these remained its chief source of revenue.

It would be quite wrong to think that the Bank of England was set up as a "central bank", with special functions not permitted to other banks; it was intended to be a large bank of the ordinary type. Associations of not more than six partners were still entitled to issue notes. The only business that was unique was the management of the government account; indeed, directors of the Bank were still saying, centuries afterwards, that the Bank was nothing more than an ordinary profit-making enterprise. Nevertheless the Bank of England developed into a central bank; it became the pattern upon which the consciously created central banks of other countries were modelled. This was because the character of banking gradually changed from the time of its foundation, until the Bank was the only institution of just that type still surviving. It was partly the association with the government, and partly the development of the cheque-deposit system by the other banks, which left the Bank of England alone in the realm of note-issue, except for small and unreliable institutions which were gradually squeezed out of existence.

Every country of importance has a central bank now, but their financial strengths and their activities vary much from country to country. What does our central bank do? In the first place, the Bank is the only issuer of notes in England; no other bank is permitted to make an issue now. It acts, as it always has done, for the government, holding the deposit balance, paying the interest on the national debt, and managing the government's borrowings and repayments. The Bank also holds the balances (which are always credit balances) of the joint-stock banks (the Midland, Barclays, Lloyds, etc.); we shall see later on why it is very important that these ordinary banks should have deposits at the Bank of England. Keeping the gold reserve of the country is another duty of the Bank; when it was

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possible to take notes to the Bank and obtain gold for them at a fixed rate, the guardianship of the reserve was much in evidence, but now gold can be got in this way no longer. Finally, the Bank manages a big fund of money called the Exchange Equalisation Account (or Fund); the purpose of this fund is to stop the rate of exchange with foreign currencies altering suddenly, for it would be very awkward if the pound one day exchanged for 100 francs and the next day went to 110 and then back to 96.

The Exchange Equalisation Fund is supposed to be a department of the Treasury, but since the Bank knows more about foreign exchange matters than the Treasury does, it is the Bank which actually does the management. This is symptomatic: in all important matters, the Bank and the Treasury work hand in hand. The government considers itself ultimately responsible for the note-issue and the policy pursued in respect of gold. The general monetary policy of the country is formulated by the government with the advice of the Bank, and it is the Bank which takes most of the steps to put the policy into operation.

§III

Commercial banks: private banks of issue; they were superseded by joint-stock banks of deposit. Interest on some accounts. Cheques. Joint-stock banks and working capital. The Clearing House: cheques on the Bank of England. Some banks not in the Clearing House.

Throughout the eighteenth century, the Bank of England was the only joint-stock banking corporation in the country. Because no others were permitted by law, there arose a great number of small banks; anyone could set himself up as a bank and issue notes, for there were no restrictions regarding the minimum amount of capital which a bank ought to possess, or anything like that; in fact, a large number of these petty banks were started by tradesmen who were not people of large means.

Nevertheless, during the eighteenth century, the private banks of issue were not grossly unsuccessful; there was an

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insistent demand for notes to use instead of coin and for notes to borrow in order to finance the raising of agricultural produce and the early industrial produce. But the bankers in general were inclined to lend too much: then cattle disease would break out, or the price of wheat would fall, and the farmers would be unable to repay the loans which a local banker had made to them; people in the neighbourhood would know that some farmers were in a bad way, and they would begin to wonder whether these would ever be able to pay back the banker; if not, the banker would lose heavily; the next stage was to wonder whether the banker would lose so much that he would not be able to give coin for his notes; someone would decide to be on the safe side and take the banker's notes to him for encashment in coin; then they told their friends what they had done, and the friends would think it wise to do the same; soon every note-holder would be arriving at the bank asking for coin, a process known as a "run" on the bank. Now, of course, the banker did not possess enough coin to encash all his notes, so that, if the run went on long enough, he would be forced to close his doors. He *might* be able to pledge his possessions with another banker and open next day, continuing to cash his notes until people felt reassured that he was really quite sound and that his notes were safe; but very often it was impossible to borrow large amounts of coin in an emergency, and the banker's doors remained shut; then his possessions would have to be sold to find cash for the notes, and often enough the proceeds were not enough to pay the notes in full. Sometimes this would happen because the banker had lent very unwisely and lost more than the amount of his capital, but sometimes it would happen because the prices realised from the sale of his assets were less than they really ought to have been since goods sold in a hurry never realise their full value.

Now when a bank had failed in the manner described, it was only natural that people should begin to wonder whether other banks in the locality were sound; a certain number of notes would almost inevitably be taken to other banks for encashment, and a panic-stricken run on them was quite likely. It often happened that one bank being really in difficulties would cause a run on all the banks in a town, and the sound ones would be brought down with the bad one simply because

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assets could not in an emergency be realised at their full value.

Small banks are inherently more hazardous undertakings than large banks, because a small bank cannot, and a large bank can, spread its risks: a small bank must lend to those people whose means and ability seem to justify the granting of credit; in the nature of the case, the sole partner, or the two or three, who carried on a small banking business would have adequate knowledge regarding only the people of their town or district; they must lend largely in one place in order to be sure of the people they were lending to. On the other hand, a big bank, lending all over the country, might sustain serious losses in one place, but be able to rush coin from branches where it was doing well, and where, therefore, its notes were not suspect, to the place where a run was developing. In such a way, even serious losses might be prevented from bringing about the liquidation of the bank.

During the Napoleonic Wars, bankers (and others) began to regard the high prices which prevailed for so many years as quite normal. Farmers, who received high prices for their wheat and other products, were rich men. Then the Wars came to an end: prices fell a long way; farmers, in particular, became rapidly poor and could not repay their loans. This happened not only in one district, but generally throughout the country: the whole structure of credit became unsound. But in the first years of peace, a great many new companies were founded, and these did a great deal of spending of capital moneys, so that a great boom developed, like the boom immediately after the Great War, and the little banks lent far too much. But the pace was too swift, and, in 1825, there was a terrible crisis, with runs of varying magnitudes on practically every bank in the country.

The passing of the crisis left widespread ruin. Men realised that small banks were dangerous, and that small notes, which were accepted in circulation so easily by those without sufficient discretion to judge of the soundness of the issuing bank, were particularly likely to be issued to excess.

But Parliament did not like to infringe the monopoly of the Bank of England too far, for the Bank had accommodated the government for more than a century, and had recently weathered a financial storm of unparalleled violence during the

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Wars. So a law was passed, in 1826, permitting joint-stock banks of more than six partners to be set up, but not within sixty-five miles of the centre of London, the metropolis being considered to be the special preserve of the Bank of England. Notes for amounts of less than £5 were prohibited at the same time.

Now in 1833, the charter which gave the Bank of England its position of monopoly was due for renewal, and much discussion went on from the crisis of 1825 to that date regarding the banking system in general and the Bank of England in particular; in consequence, changes were made: the only one which concerns us at the moment provided that joint-stock banks should be permitted to exist in the London area, but without having the right of issuing notes.

The prohibition of note-issue to London joint-stock banks was not the revolutionary change it might appear to be, for the cheque-deposit system was just beginning to make rapid headway, and probably would have superseded the note-issue system without the coercive stimulus of the Act. In 1844, after another crisis, there were a lot more changes, among which was a regulation that no new banks were to be allowed to issue notes at all, and that those which were then issuing notes were not to issue more in future than the average amount in circulation during the first three months of 1844. The legislators were whipping a dying horse.

But the new joint-stock banks specialising in deposits did not become the largest unit in the monetary system easily nor within a short time, for they had to overcome the opposition and hostility of the Bank of England and the old established private banks, of which the London ones were particularly antagonistic. The principal complaint against the new establishments was that they allowed interests on deposits—the identical complaint which had been made regarding the Bank of England itself nearly a century and a half before! The present practice regarding interest on deposits is as follows: on demand-deposits no interest is paid; on time-deposits the joint-stock banks usually pay different rates in London from those granted in the provinces; the London time-deposit rate used to be 2% less than Bank rate, which is the rate at which the Bank of England is prepared to make certain loans; but now, Bank rate itself is only 2%, so that the joint-stock banks have reduced

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the margin to $1\frac{1}{2}\%$, thus paying $\frac{1}{2}\%$ on London time-balances. Country time-deposits used to earn $2\frac{1}{2}\%$, whatever Bank rate might be, but 'now' the banks will give only $1\frac{1}{2}\%$ on them. Bank rate has been at 2% since 30 June 1932; when eventually it goes up higher, it is probable that the banks will revert to the old methods of giving 2% less than Bank rate for London time-deposits and perhaps as much as $2\frac{1}{2}\%$ again for country time-deposits.

When we think of the career of a cheque—drawn, handed to the payee, paid into the payee's bank, its amount transferred from the payer's bank to the payee's bank, cancelled by the payer's bank and handed back to the drawer—it seems a very elaborate business, but it is a system which both drawer and payee find convenient. The use of this system could not spread very widely, however, until a certain stage of elementary education had been reached by the mass of the people, since making out a cheque entails the art of writing. Furthermore, economic development had to reach a certain stage before the detection of forgery became everywhere sufficiently sure and speedy for safety.

Besides managing the cheque-deposit system, and performing numerous minor services for their customers, the joint-stock banks grant credit. Why? What is the credit used for? Some of the people who go to a bank and ask for credit are simply in need of money to pay for their ordinary living expenses. Suppose a young man's father dies while he is still at a university, not earning any money for himself; some time will elapse before the trustees of his father's estate can make over the assets to him; the young man therefore goes to his father's bankers and asks them to make him a loan, which they will very possibly do without making any conditions at all. But if the bank in question does not know the applicant for a loan, it will insist upon security, which means that he will have to transfer to their possession some stocks or shares or something else which can at any time be sold without difficulty; the value of the securities transferred is always greater than the amount of the loan, and the bank will not accept shares which are highly speculative and may fall heavily on the stock exchange. The borrower does not actually sell the securities to the bank; he pledges them, and when he pays off the loan the bank will hand them back to him. A great many people find themselves

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at some moment short of money, and, not wishing to realise their assets, obtain a loan from a bank to cover their board, lodging and so forth; they may be anticipating income from which they intend to pay the bank back, or they may be trenching on their capital with no hope of repayment except by the ultimate sale of the securities pledged. Loans like these are all called consumption loans.

It is not consumption loans, however, which form the bulk of the banks' advances to their customers. Most of the loans are productive loans, which may be described also as the working capital of producers. Banks lend mostly to people who are engaged in business of some sort. A successful shop may want to extend its premises: the partners do not want to sell the firm's reserve, which consists, let us say, of £2,000 worth of Consols; they may not be sure, in any case, just how much of it they will spend so that it seems a pity to sell the whole amount, and they are afraid that, if they sell part of it, they may have to sell more later. So they go to the bank and pledge the whole amount against an overdraft of perhaps £1,500. With this available overdraft they pay for the extensions, and proceed to do a larger trade, from the greater profits of which they pay back the bank. In this case, it is capital spending which the bank has been financing.

Similar to the borrowing of such a shop are the great numbers of loans made to firms to enable them to buy raw materials or the stock of their trade. Practically all of these, whether in the form of loans for definite amounts or in the form of overdrafts, are granted at interest against securities pledged by the borrowers, the mechanism being just the same as in the case of a consumption loan.

It happens that, at the moment, long-term rates of interest are moving around the historical average figure of normal times,¹ namely 3½%, compared with 5%–6% which was common before the great depression from which we are now recovering; short-term interest rates are very low. Thus many firms have come to the conclusion that it is not worth while to pledge their reserve securities with a bank, which will charge probably 4% or 4½% on the loans it grants, and they have frequently sold the securities outright on the stock exchange, using the money obtained thereby in the course of their business instead of

¹ Not war nor immediately post-war periods.

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getting credit money from the banks. This process is particularly noticeable when we look at the balance-sheet of one of the joint-stock banks and observe that the total amount of advances to its customers is very much less than it used to be.

In the early days, before the joint-stock banks existed, the private bankers had begun to turn to deposits because the public preferred the Bank of England's notes to theirs. Their customers paid in cheques drawn on other banks, so that messengers had to be sent round to the other banks to collect the money transferred. As the cheque-deposit system grew, this procedure became cumbersome, wherefore the messengers gradually formed the habit of meeting at a chosen place in order to cancel off the cheques due from bank A to bank B with those due from B to A, and likewise those between A and C, B and C, A and D, etc. This offsetting process later received official recognition, and a special place was hired for the purpose. This is what is called the Clearing House. The upstart joint-stock banks were not admitted to the Clearing House at first, but as they grew in importance, it became irksome to settle with them directly and they threatened to set up a clearing house of their own; in 1854, therefore, the joint-stock banks were admitted.

Even with the clearing procedure, there were, of course, balances to be settled by the transfer of money since the amounts due from bank A to bank B would not exactly offset the amounts due from B to A; these were settled by the transfer of Bank of England notes. But, in 1854, the banks all agreed to keep accounts with the Bank—the joint-stock banks had not been allowed to have them before this date—and balances were thereafter settled by cheque-deposit transfers between the Bank of England accounts of the clearing banks. The system was rounded off by the Bank of England becoming a member of the clearing in 1864. Banks not included in the clearing have to make settlement by drawing cheques on a bank which is a member.

In August 1935, a Lancashire bank, the District Bank Ltd., absorbed the County Bank Ltd., whose head office was also at Manchester, thereby enhancing its importance considerably. In January 1936, the District Bank became a member of the London clearing; this latest recruit raises the number of clearing banks to eleven (twelve with the Bank of England). The

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whole eleven, with their total assets in millions of pounds (January, 1937), are as follows:

	(£000,000)
1. The Midland Bank Ltd.	539,1
2. Barclays Bank Ltd.	462,7
3. Lloyds Bank Ltd.	454,3
4. The Westminster Bank Ltd.	409,0
5. The National Provincial Bank Ltd.	341,6
6. Martins Bank Ltd.	105,1
7. The District Bank Ltd.	90,5
8. The National Bank Ltd.	42,1
9. Glyn, Mills & Co.	41,4
10. Williams Deacons Bank Ltd.	41,0
11. Coutts & Co.	27,7

The first five of these are known as the "big five". Number 8, the National Bank, is an Irish corporation. Number 10, Williams Deacons, is owned by a Scottish bank, the Royal Bank of Scotland; number 11, Coutts, is owned by the National Provincial. As mentioned, the Bank of England is also a member of the clearing, but it would not be right to put it down with the others because its position in the money market is a special one.

The way in which debts may be offset, as they are cancelled in the clearing house, without any money passing, may be illustrated by a somewhat unedifying story: A, upon arriving in an hotel, deposited a \$1,000 note with the proprietor, who stole the note as soon as A had left his office, in order to pay B who was pressing him for payment of a debt of that amount; B, receiving the note, handed it to C to whom he owed a similar amount; C paid it to the hotel proprietor whose debtor he was for the same amount. A, after paying his bill, received back his \$1,000 note, but tore it in pieces, explaining that it was a forgery only left with the proprietor in order to impress confidence that his bill would be paid. The point of the story is clear enough: the triangular debt position between the proprietor, B and C could have been resolved by cancellation, without the use of the note, since each stood in relation to the other two as possessing plus and minus \$1,000.

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§IV

The money market:

- (i) *Bank of England;*
- (ii) *Clearing banks;*
- (iii) *Non-clearing banks;*
- (iv) *Discount and acceptance houses;*
- (v) *Bill brokers;*
- (vi) *Finance companies.*

What are the institutions which perform the business of what is rather vaguely called the money market? Firstly, there is the Bank of England, the central bank, of which we have already said something; secondly the clearing banks, concerned chiefly with the management of the cheque-deposit system, advances to their customers, and with making investments on their own behalf. Thirdly come the non-clearing banks, which are not so important; a lot of their business is rather special work, some being concerned with finance in particular parts of the world, some being branches or agents of big banks in other countries, and many specialising particularly in the exchange of one country's currency for another's.

Fourthly, there are those firms known as discount and acceptance houses. These make a speciality of buying bills of exchange at a discount and holding them until they are due for payment; they have a very wide knowledge of the firms who draw and those who accept bills, and this enables them to select the sound bills which will be paid at maturity and reject the bad ones. Many merchants abroad are not well known to those who supply them with goods both from this country and from others; this being so, the suppliers are not willing to take the risk of drawing bills against the goods they sell, so the buyers arrange that a well-known London discount house shall accept the bills for them; the discount house will have found out all about the buyers, and the suppliers draw bills on them instead of on the ultimate buyers. Acceptance houses really lend their financial prestige to enable buyers to get the goods they want without trouble, and for this service they earn discount rates.

Fifthly, there are the firms which deal in bills of exchange,

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not discounting directly for manufacturing and merchanting companies, but buying and selling bills among themselves and with all the different banks, discount and acceptance houses. These firms are called bill-brokers, and they are, properly speaking, of two types: the "running" broker whose business it is to collect bills from the market, and even from outside merchants to some extent, and to sell them at once at the best price available; their knowledge of the market enables them to discern where the best price will be given for any particular bill; running brokers are little more than agents, and do not keep a stock or, as it is called, a portfolio, of bills themselves. The other type of broker, who is much more numerous and important than the first, is a retailer; he buys bills and usually keeps them in stock for part of their life, and then sells them to banks and other institutions which like to have bills which have only a short time left to run.

Lastly, there are finance companies which lend money for longer periods than the others are willing to do. Their customers are largely foreign and include governments and other authorities, whose revenues are not derived from profit-making enterprise.

In the London money market, the various firms are specialised to different extents; there are, for example, discount houses pure and simple, but there are also firms which should be classified partly under more than one of the six headings given above, a single firm, for instance, performing banking, discount and brokerage business.

§v

The stock exchange: purpose; different types of securities; suiting investor and borrower; brokers and jobbers.

We have already mentioned the stock exchange in one or two connections, and it is necessary to give a few preliminary explanations regarding it, though the consideration of some of its aspects must be left until Section 3 of Chapter XIV.

The stock exchange is a market; it is a place situated in the City of London where stocks and shares can be bought and sold; a very great variety of stocks and shares are dealt in, and it is possible to buy or sell almost anything from British govern-

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ment loans, which are quite certain to be repaid at the right time, to the shares of The Hopelessly Wild Cat Trading & Finance Co. whose profits are as dubious as its directors' fees are certain.

This is a great convenience: it means not only that we can sell our securities if we find suddenly that we want the money, but also that we can invest our savings without having to look for someone who wants to borrow them. Furthermore, we can change, from time to time, among securities of different degrees of riskiness, and spread our money over a wide range of different investments so that our fortunes will not be linked with only one enterprise.

Securities dealt in on the stock exchange are of different sorts: there are ordinary shares which earn a dividend; the dividend is the residual profit of a firm, after all its expenses and prior claims have been paid, and it is split up among the various shareholders usually once or twice a year in proportion to the amount of shares which they hold. Then there are preference shares which pay a fixed rate of interest to the holders; the interest on preference shares is one of the prior claims which a firm must discharge before it gives out anything to the ordinary shareholders. It is the ordinary shareholders who may make the big incomes (or may make nothing at all), but the preference shareholders are more certain of getting their fixed rate. A special type of preference share is called a cumulative preference share; if a firm fails to pay the full rate on such shares in any year, the difference must be carried forward as a prior claim on the profits of subsequent years, and the ordinary shareholders do not receive anything until the accumulated arrears of preference interest are paid off. Finally, there are debentures which are loans rather than shares; if preference shareholders get no return on their investment, they have to grin and bear it; they have wrapped up their fortunes with the firm in question, and if the firm does not make enough profit to pay a preference dividend, they are the losers. But if a firm fails to meet its debenture interest, the debenture holders can put the firm into liquidation, have its assets sold and recoup themselves from the proceeds. They may decide in any particular case of default not to take such a drastic step, but they are entitled to do so if they do not receive their fixed rate of interest.

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Shares are always numbered, which makes it easier to prevent people being swindled with forged shares. In dealing, it is always necessary to buy or sell a whole share; fractions of a share are not permissible. Shares may be for almost any amount; one-shilling shares are known; two-shilling shares are quite common among rubber producing companies; five-shilling and ten-shilling units are fairly well represented; but the big thing is the £1 share: perhaps two-thirds of all the shares in the London market are of this denomination. Then there are the larger units, of which £5 is probably the most usual. When a company starts and issues shares, it may not require the shareholders to pay the full amount of the share all at once. It may issue shares of £1 "ten shillings paid"; that means that it can require the investors to pay the other ten shillings per share at any time. Nearly all the clearing banks have partly paid shares, £5, £1 paid, being common to several; they are unlikely ever to call for the rest.

Stocks are almost exactly the same as shares, but the former must be paid-up in full; they do not require a particular number, and any odd fraction of them can be bought or sold. They are divided into different classes like shares. There is also a further type of stocks and shares, called deferred stocks and shares, which is not extensive; as the name suggests, they rank for payment of dividend after the ordinary shares.

The purpose in having different types of shares is to suit both investors and borrowers: different investors do not all wish to take the same risks and the variety of security enables them to choose what they want, which will in many cases be a mixture of the different types. If a company, which is doing well, wants to extend its business, it may decide to raise fresh capital; the shareholders, who are the owners of the firm, probably will not want to share the big profits which they expect with new ordinary shareholders, so it is decided to issue debentures. In this and other ways the variation in the ranking of stocks and shares serves the purpose of the borrowers.

The people who deal on the stock exchange fall into two groups, which are quite separate. Brokers are the people who buy and sell for the public; they are agents who act on commission; what they sell must be bought in the market; it does not come from among such securities as they may themselves

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possess; and the shares which the public sells are sold by them in the market, not bought by themselves.

The others are called jobbers: their business is to hold blocks of all sorts of stocks and shares, and to be prepared to buy or sell on their own account whatever the brokers want to deal in on behalf of the public. Jobbers do not have any dealings with the public directly, but only through the brokers. A firm of jobbers does not try to deal in every security in the exchange, because there are so many, but specialises in rubber shares or gold-mining shares or something else, and the brokers, of course, know the right firms of jobbers to go to in order to deal in any particular shares.

BOOKS

1. See J. Laurence Laughlin: *A New Exposition of Money, Credit and Prices*, 1931, Volume II, Chapter II.
2. See A. Andréades: *History of the Bank of England, 1640 to 1903*, 1935, Part II, Chapter I (concerning the foundation of the Bank). For its present functions, see Walter Leaf: *Banking*, 1935, Chapter II, and Norman Crump: *A First Book of Economics*, 1934, Chapter XI.
3. For the supersession of issue banks by deposit banks, see Walter Bagehot: *Lombard Street*, 1915, Chapter III, Section 1. For the present position, see M. C. Buer: *Economics for Beginners*, 1927, Part II, Chapter V, and Norman Crump: *A First Book of Economics*, 1934, Chapters IX and XII. Regarding the Clearing House, see E. Miles Taylor and Charles L. Lawton: *General Financial Knowledge*, 1935, Volume II, Chapter XI.
4. See especially Walter Leaf: *Banking*, 1935, Chapter III. Particularly concerning non-clearing banks, discount and acceptance houses and bill-brokers, see Hartley Withers: *The Meaning of Money*, 1932, Chapters VIII and IX.
5. See Milton Briggs and Percy Jordan: *Textbook of Economics*, 1935, pages 611-612; also Norman Crump: *A First Book of Economics*, 1934, Chapter XXI and pages 110 and 111.

CHAPTER VI

THE VALUE OF MONEY: QUANTITY THEORY

§I

The meaning of the value of money: its purchasing power; reciprocal of prices. A particular price-level. Index numbers. The question of the relative importance of items. The weighted index. Relative expenditures as weights. The inevitability of weighting. The complex commodity, a short-cut method. Theoretical shortcomings and practical difficulties in the compilation and use of index numbers. The concept of a general value of money, an approximation. Approximation general in practice. New commodities. False categories. Changing the weights for the sake of precision not a feasible method.

In economics, the value of a thing means the amount of money which it is worth; the value of everything is expressed in money. Conversely, the value of money is expressed in everything. Sixpence will buy a packet of cigarettes; if the cost of the packet goes up to ninepence, then the value of money is only two-thirds as great as before in terms of cigarettes. Imagine the value of everything to go up by 50%; that is the same thing as saying that prices are multiplied by $\frac{3}{2}$; then the value of money is multiplied by $\frac{2}{3}$. These fractions are, of course, reciprocals, and we actually speak of the value of money as being the reciprocal of prices. The value of money means its purchasing power: when prices go up, it purchases less; when prices go down, it purchases more. Thus we speak of the value of money as moving inversely with the level of prices.

We have to think of the price of everything when we speak

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of the value of money,¹ unless we are considering the purchasing power of money in a particular market, the cotton market for instance. Suppose there are three sorts of cotton, A, B and C, at 2/-, 3/- and 4/- respectively; now we will call the value of money (in terms of cotton) 100 while these prices prevail. Then let us consider another period of time when the prices have altered as follows: A 2/6, B 2/9, C 6/-; they have not all moved in the same direction, but taken together they have advanced by one-quarter, or 25%; in the second period of time the value of money has therefore gone down to $\frac{100}{125} \times 100$, which equals 80 compared with the original purchasing power of 100. That is the point: the comparison. We do not become any wiser by saying "we will call the value of money 100 while these prices prevail", but if we work out its value in the same way when the prices have changed, then we do get another figure to compare with the 100, and the *relative size* of those figures means a lot. We could have called the original value 10 or 1, and worked out the second one as 8 or .8; absolute size means nothing; we do it only for the sake of comparison.

How did we work out that the prices of the three sorts of cotton together had gone up by 25%, or, as we may express it, that the price-level of cotton had gone up from 100 to 125? Simply by adding up the two sets of prices and expressing the excess of the second over the first as a percentage of the first. But adding up prices like this assumes tacitly that the sorts of cotton are equally important. Perhaps they are not: suppose now that the average daily dealings are:

- A 1,000 pounds;
- B 2,000 pounds;
- C 200 pounds.

Then we have an average daily expenditure of:

A 1,000 pounds @ 2/- per pound	£100
B 2,000 pounds @ 3/- per pound	£300
C 200 pounds @ 4/- per pound	£40
Total	£440

¹But see the latter part of this section for a qualification of the concept of a general price-level.

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What is our criterion of importance? It is *not* the physical quantities of the various grades of cotton: we cannot say that the importances are in the ratio 1,000:2,000:200, or, as we should write it for mathematical simplicity, 5:10:1. That would be true only if the three grades were quoted always at the same price. And we have chosen an example wherein all our quantities are expressed in pounds; if we had chosen different sorts of things, bread and beer, and considered the value of money to someone buying these things, we should have had no way of comparing the physical quantities: if a man lived on 1,000 lbs. of bread and 30 gallons of beer in a period of time, it would very obviously not be permissible to say that the importance of bread compared with that of beer was as 1,000 to 30. Why should beer be expressed in gallons? If we had written 120 quarts of beer, or 240 pints, the relative importances would have looked like 1,000:120, or 1,000:240, supposing that we took physical quantity to indicate importance. The point is that no terms of equivalence exist between pounds and gallons or quarts; we can never say that a pound in any sense *equals* so many quarts; a pound of water equals so many pints of water, but here we are measuring the same quantity of water according to two different scales; the scales themselves are unrelated to each other.

Our criterion of importance is the *value* of the various quantities of the different items, the relative expenditures. In our cotton market, the respective importances are £100, £300 and £40. It is monetary importance that we have in mind. We may feel that bread, the staff of life, is very important, and that champagne, an occasional luxury, is not nearly so important; here we are thinking of importance in providing mankind in general with sustenance. But if we spend £20 on bread in a certain period, and £20 on a case of champagne, consuming both within the period, then, so far as our expenditure is concerned, they are of equal importance.

When we obtain three sums of money to indicate the importances of our grades of cotton, we possess a measure of an inconvenient form; we want a simple arithmetical relation free from units of currency. Thus we say £100:£300:£40::5:15:2—simply dividing by the highest common factor, £20.

This is not a mysterious operation: we say that £300 is spent on grade B and £100 on grade A, therefore B is three

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times as important in the monetary sense as A; in importance A is to B as 1 to 3, or as 5 to 15, which we wrote in the usual arithmetical manner when we included the importance of grade C as 2.

Now let us use our relative importances in estimating the value of money. What we usually do is not to calculate the value of money directly, but to calculate the price-level of cotton, calling the price of each grade 100 in the first case, and estimating proportionate figures when prices have changed. Each 100—or whatever the figure may alter to at another time—is called the index number of the grade in question. The importances are described as the weights of the different grades. Our operation consists of multiplying the index of each grade by the weight of that grade, adding up the products and dividing by the sum of the weights.

Thus we have six columns, to which we will attach algebraical symbols, each with a suffix to show that it belongs to the first point of time. When we compare one year's prices with another's, we describe as the *base year* the year in which we call the indices of all the items 100, that is, usually, the first year.

BASE PERIOD

Items.	Price. (p_i)	Price-level. (p_{i1})	Quantity. (q_i) lbs.	Expenditure. (e_i) $(=Sp_i q_i)$	Weights. (w_i) $(=e_i \div £20)$	Weighted indices. ($p_{i1} w_i$)
A	2/-	100	1000	£100	5	500
B	3/-	100	2000	£300	15	1500
C	4/-	100	200	£40	2	200

$$\text{Thus, } \frac{\sum p_{i1} w_i}{\sum w_i} = \frac{2200}{22} = 100.$$

The final figure of our operation is thus the price-level of cotton, of the three grades considered as a whole; naturally it is 100 since we wrote all the prices as 100; it could not be anything else, whatever weights were used.

We should emphasise that it is impossible to avoid weighting an index number; it is not a matter of choice whether we use weights or not, but an inevitable and automatic process. If we wish to consider the purchasing power of money over

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real income, for instance, we might call the average prices of each income good in 1936 100, and then take the average prices for the same goods in 1937, calling them 95, 107, 119, 115, 84, etc.; the difference of each figure from 100 indicating the percentage whereby the price in question had increased or decreased compared with our base year, 1936. Then we might add up our 1937 figures and divide the total by the number of items, so producing an index figure for income goods as a whole. It does not seem as if we have done any weighting; but actually we have done so: we have counted all the individual prices as of equal importance in establishing our income-goods index; that is to say, we have tacitly given each item the same weight, so that we can describe the weights by the series 1:1:1:1:1:1.

When we added up the prices of the three grades of cotton, at the beginning of the section, and produced an index number for the second period of 125, and a corresponding value of money of 80, we were really using the weights 1:1:1 for our three grades.

But, weighting the grades properly for the second period we have:

SECOND PERIOD

Items,	Price. (p ₂)	Price-level. (p _{i2})	Quantity. (q ₂) lbs.	Expenditure. (e ₂) (=Sp _{i2} q ₂)	Weights. (w ₂) (=e ₂ ÷£20)	Weighted indices. (p _{i2} w ₂)
A	2/6	125	800	£100	5	625
B	2/9	91 $\frac{1}{3}$	2181 $\frac{9}{11}$	£300	15	1375
C	6/-	150	133 $\frac{1}{3}$	£40	2	300

$$\text{Thus, } \frac{Sp_{i2}w_2}{Sw_2} = \frac{2300}{22} = 104\frac{6}{11}.$$

This figure, 104 $\frac{6}{11}$, is the price-level of cotton in the second period. The value of money to correspond with it would be 95 $\frac{1}{3}$, since $\frac{100}{104\frac{6}{11}} = \frac{95\frac{1}{3}}{100}$. Here is a figure for the value of money, to compare with our original 100, which is very different from the figure 80, which we obtained at first by adding up the three prices and writing the price-level of cotton as 125. But this is just what we should expect, for C, the rise in whose price brought down the value of money so much in the first com-

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parison, is really quite unimportant compared with the other two, and B, whose price actually went down is the most important of all.

Another point to notice is that the quantities in the second period must be different. Our criterion of importance is expenditure, and if the importances remain the same, that is the same thing as saying that the expenditures remain identical. If the importances are not the same, there is no basis for comparison, a point which we shall return to examine further in a moment. Thus, if $e_2 = e_1$ in each grade, and $p_2 \neq p_1$ in each grade, then $q_2 \neq q_1$ in each grade.

But now let us observe what appears, deceptively, to be a different case wherein the basis for comparison does not exist, since expenditures are no longer the same as in the base period. Now, we shall consider the quantities to be those of period 1, and the prices to be those of period 2, as follows:

Items.	Price. (p_3)	Quantity. (q_3) lbs.	Expenditure. ($e_3 = Sp_3q_3$)
A	2/6	1000	£125
B	2/9	2000	£275
C	6/-	200	£60

Now $\frac{Se_3}{Se_1} = \frac{\text{£460}}{\text{£440}}$, whereas $Se_1 = \text{£440}$, and

$$\frac{Se_3}{Se_1} \times 100 = \frac{\text{£460}}{\text{£440}} \times 100 = 104\frac{6}{11}\%.$$

The result of the third operation, of course, produces exactly the same answer as the second operation did. In other words, we have an admirable short-cut method for obtaining our index number. We can demonstrate it algebraically, so as to show that it is a proper method applicable to all cases, proving that

$\frac{Se_3}{Se_1} \times 100$ must equal $\frac{Sp_3w_2}{Sw_2}$, as follows:

$$\frac{Se_3}{Se_1} \times 100 = \frac{Sp_3q_3}{Sp_1q_1} \times 100 = \frac{Sp_2q_1}{Sp_1q_1} \times 100.$$

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$$\text{Similarly, } \frac{Sp_{i_2}w_2}{Sw_2} = \frac{S\left(\frac{P_2}{P_1}\right) \times p_{i_1} \times w_1}{Sw_1}$$

$$= \frac{S\left(\frac{P_2}{P_1}\right) \times 100 \times p_{i_1} q_1}{Sp_1 q_1}$$

$$= \frac{Sp_2 q_1}{Sp_1 q_1} \times 100.$$

$$\text{Therefore, } \frac{Se_2}{Se_1} \times 100 = \frac{Sp_{i_2}w_2}{Sw_2}.$$

What, then, is this quantity, $\frac{Sp_2 q_1}{Sp_1 q_1} \times 100$ to which we find both our formulae for the index to be equal? It is the first year's¹ quantities, each at the second year's¹ prices, divided by the first year's¹ quantities, each at the first year's¹ prices, multiplied by a hundred; or we might call it one hundred times the ratio of the second year's to the first year's expenditure.

This simplified method of using the same quantities of the different items of our index at two or more points of time, and supposing the expenditures to change, is a mathematical convenience. What we are really doing is to measure the price-level of a complex commodity, made up of certain specified quantities of particular things: we might compile an index for measuring the price fluctuations of a complex commodity consisting of 1,000 lbs. of bread and 30 gallons of beer; the physical quantities are not going to be compared in any way with each other: on the contrary, we shall assume them to be fixed, each at their respective amounts all the time, and the index number obtained must be the same as the one resulting from the assumption that expenditures are the same and quantities alter.

Actual indices of diverse objects are compiled by using the complex commodity method; it is easier. But we must not let this fact lead us to suppose that the quantities are vital; our criterion is that the items in our index remain of the same relative monetary importance.

¹ Most of the periods we deal with are years.

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This does not mean, indeed, that total expenditure must remain the same from year to year; it means that *relative* expenditure must be the same: so long as expenditure is in the proportions 5:15:2 in our example, the basis of comparison exists: we might have expenditure £200, £600, £80, all double what they were in the base year, for instance.

This brings us to an important point of statistical theory. Over a long period of time, or in the comparison of two groups of people living in widely differing circumstances, the weights will not, as a matter of experience, remain the same; relative expenditures on different items will change. To the extent to which that happens, the basis of comparison is vitiated.

In practice, it is too difficult and costly an operation to hold an elaborate statistical enquiry in order to find out whether the relative expenditures on different items are the same; we go on measuring the value of a complex commodity until we have some obvious reason to suspect that it no longer represents the expenditure of the group we have in mind.

This brings us to the question of whether the concept of a general price-level, fluctuating in relation to itself in previous years, is theoretically admissible. Strictly speaking, it is not: we have no reason to suppose that relative expenditure upon different items remains the same from year to year. We can think of a general price-level as including everything which has existed during the year and is purchasable in normal circumstances with money. It is easier, perhaps, to consider the index as being that of an extremely complex commodity, made up of both income-goods and capital-goods. But since we may feel sure that this very complex commodity does not remain stable in content, either for one nation or for the whole world, we must remember that we are dealing in terms of a rough approximation, whose theoretical precision the very march of progress invalidates. Similarly, if general warfare breaks out, and the economies of the nations are consequently warped to military ends, then, clearly, durable goods currently produced change in nature significantly: instead of houses, battleships are being built, and guns instead of motor-cars. Thus the complex commodity no longer includes so many houses and so many battleships, but more of the latter and less of the former, for some houses will have become worn out and replacement building notoriously falls off in time of war.

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When we think of our approximate general price-level, we have in mind the values of income-goods to the public as consumers, plus the values of capital-goods to the public as owners of wealth. Thus we must be careful to include everything existing during the year once only. If we included a certain thing, let us say cotton, every time it was the object of a monetary transaction, we should be counting the same thing twice or more: some piece of cotton might be sold a dozen times among members of the cotton market. What we ought to do, then, is to reckon that piece of cotton once only at the average of the twelve prices at which it has changed hands. Even if we imagine a general price-level estimated in this way, however, we are formulating only an approximate concept.

No general price-level is in fact compiled in this way because the practical difficulties, collecting the various prices and assessing weights strictly appropriate to the base year, and approximately relevant to subsequent ones, prove to be difficulties which are insuperable in practice.

In the practice of index numbers, indeed, the process of approximation is typical.¹ There exist in many countries indices of wholesale prices, and ones which are based upon retail prices. The latter are compiled principally for measuring the cost of living to poor persons, and investigation suggests that the composite commodity, representing necessities of life² to receivers of the lowest strata of incomes, changes but slightly over decades.

One of the most dangerous forms of approximation in economic statistics is the practice of applying indices to groups of persons to whom they do not strictly relate. Thus it is dangerous to apply the cost of living index to the middle classes since the things included in the index, and their weights, belong to the poorest sections of the community.

No basis of comparison exists, as we have said, between strata of a population purchasing substantially different things, or the same things in markedly different proportions. If we possessed two cost of living indices, one for poor and one for

¹ It is because our statistics are in practice only approximate that we usually work out indices to the nearest integer; if we worked out indices to fractions, or to two or three places of decimals, it would give a false appearance of precision.

² Including, of course, rent, lighting and heating, as well as foodstuffs.

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rich, called them each 100 in the base year, and found that, whilst the rich persons' index had advanced to 120, the poor persons' had fallen to 90, it would be inadmissible to deduce from these facts alone that the purchasing power of money was too high to the poor compared with its purchasing power to the rich. That would be true only if some sort of equilibrium had existed between the two purchasing powers in the base year. We have assumed this to be so if we describe the relation 120:90 as an improper one, and such an assumption would require an elaborate argument to justify it.

One index, sometimes identified wrongly with the general index, may be described as the transactions standard. Here, a standard means an index for measuring the value of money according to a particular criterion. The criterion is the volume of transactions entered into in respect of the different items. But the volume of transactions measures the importances of commodities to dealers in money as such, and we are not interested in dealers in money as such. When we think of the public, we are interested in a national group as consumers and as owners of wealth.

Two price-levels which have figured largely in monetary theory, as we shall find in Chapter VII, are those of consumption-goods available to the public, and of output as a whole. Some output, obviously, such as dies and machine tools, is used almost exclusively in productive processes and is not, in this sense, available to the public for consumption. But it is clear that the public which consumes available output, and deals as producers and consumers with aggregate output, is not to be compared with itself at different times if available output and aggregate output each come to mean different things to it. These price-levels will prove to be interesting in themselves, but they cannot be applied strictly to the comparison of the value of money to the public at different times.

A particular case of a change in the composition of output is the introduction of a new commodity. If, for example, the public begins to eat some new patent food in place of bread, it will not be permissible, in strict theory, to compare the same group in two periods, the first being before the introduction of the new food and the second being afterwards. What is really in question is the validity of the weights: before the new

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good exists, clearly its weight is zero; afterwards its weight will become of significant size; therefore a scheme of weights, neglecting the new food no longer applies to the expenditure of the group in question.

Furthermore, we must notice a pitfall concealed in the use of words which enables a theoretical objection to be raised against nearly all attempts to compare the value of money as between different times or places. For, when we take stock of prices, we observe, for example, the price of Player's Navy Cut Cigarettes: if a packet of twenty cost 1/- ten years ago and 1/- to-day, we say that the price is the same. But is the packet of 1927 really the same as the packet of 1937? The cigarettes may be larger, better in quality and better packed; improved methods of distribution may have enabled the public as a whole to obtain fresher cigarettes. The name of commodities may remain unaltered, while the realities change, often enough in subtle and obscure ways—and not always for the better.

We may say, then, that our categories, the items which compose our indices, are often false categories.¹ To take another example, suppose that what is called the quartern loaf were substantially better, or worse, in quality than during last century, while the price is unchanged: there is, nevertheless, a concealed alteration in the value of money, as expressed by the price of bread, or by any index into which bread enters as a component item.

The point should be stressed that, as well as new things becoming purchasable with progress, some old ones cease to be purchasable with the passage of time; further, that articles which are identical at one place have widely discrepant significances in different places. As Mr. Keynes wrote: "We are not in a position to weigh the satisfactions for similar persons of Pharaoh's slaves against Fifth Avenue's motor-cars, or dear fuel and cheap ice to Laplanders with cheap fuel and dear ice to Hottentots."²

In conclusion, it is worth while, perhaps, to demonstrate that weights must be kept the same if a comparison is to be made. If we adopt the complex commodity short-cut, our

¹ Consider, for instance, the falseness of the category motor-~~cars~~.

² *A Treatise on Money*, 1930, Volume I, page 104.

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complex commodity must remain of fixed content. It might seem that we could, in theory, change the weights, making them precisely appropriate to each period. But we can show that such a proceeding can produce a ridiculous result. It is true, too, that changing the weights must always distort the final figures, but to demonstrate this would require a long and elaborate argument too large for inclusion in the present book.

Thus let us consider the case of a man spending £18 upon two commodities, A and B, in three successive years, with the following varying distributions:

1.	A	148 units @ 1/-	7	8	0
	B	106 units @ 2/-	10	12	0
			£18	0	0

2.	A	120 units @ 1/3	7	10	0
	B	120 units @ 1/9	10	10	0
			£18	0	0

3.	A	80 units @ 1/3	5	0	0
	B	1040 units @ 1/9	13	0	0
		7	£18	0	0

If we do not keep the same weights, we shall take, in our example, the number of shillings for each item in each case, so that the sum of the weights will be always 360.

$$\text{Therefore } \frac{\text{Sp}_{i_1} w_1}{\text{Sw}_1} = \frac{100.148 + 100.212}{360} = \frac{36,000}{360} = 100;$$

$$\frac{\text{Sp}_{i_2} w_2}{\text{Sw}_2} = \frac{125.150 + 87.5.210}{360} = \frac{37,125}{360} = 103,$$

$$\frac{\text{Sp}_{i_3} w_3}{\text{Sw}_3} = \frac{125.100 + 87.5.260}{360} = \frac{35,250}{360} = 98.1$$

We have shown that, if we change the weights, then the price-level falls from 103 to 98 as between the second and third years. But this is absurd, since the prices prevailing are the same.

¹ To the nearest integer.

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Thus we may say that a method wherein the weights are changed to suit the different years precisely does not produce a valid comparison.

§II

The general case of quantity and value: the quantity of money.

The velocity of money as a determinant of its value. The demand for money to hold: Cannan. Seasonal variations in the demand for money. The elasticity of the demand for money: elasticity of demand for money equal to unity—static and dynamic aspects; long run and short run.

We are familiar with the general idea that the more there is available of any commodity the less its value becomes. Demand curves slope downwards in the sense that, if a manufacturer wants to sell more of his product, he must lower the price. In general, the fact of being rare is enough to make a thing valuable, and we can put the same idea in more comprehensive form by saying that quantity and value vary inversely.

This is true also of money. If we find ourselves suddenly possessed of 50% more money than usual, we enjoy a pleasant feeling of affluence, and we incline to buy things which seemed too expensive hitherto. While it purchases the same things as before, money does not seem so precious because we have more of it; we should feel just the same about any other commodity. But suppose that the government began to manufacture inconvertible treasury notes and one morning sent to everybody a sum equal to 50% of the money each person possessed: there would be a riot to get near the shops, for everyone would feel so rich that they would all try to spend more than usual at once. The only way for shopkeepers to prevent their entire stock being sold out would be to put up prices, and quickly to order more goods from the wholesalers; but if all retailers were ordering more, wholesalers would have to put up prices, and then manufacturers would be forced to do, and so on, until all prices had been forced up enough. But if all prices went up, then the value of money has gone down; that is the effect of increasing

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its volume by 50%, and of course, a bigger depreciation in the value of money would be caused by increasing the quantity 100%, and money's value could be increased by decreasing the quantity of it.

But there is another factor affecting the value of money: the speed at which it circulates, which is usually called the velocity of circulation of money, or, more shortly, the velocity of money. For money is used, of course, to buy things, and what we have in mind when we speak of velocity is how many times it is used to buy something within a given period. Let us compare two states of affairs: in the first, let us suppose that, on the average, money is used to buy something once in a week; for the rest of the time it is lying idle in someone's possession; in the second case, suppose that money, on the average, is used to purchase things twice a week. Let the amount of goods sold be the same in both cases: then in which case is the greater quantity of money required? Clearly in the first case, wherein the velocity was slower. So we may say that as the velocity of money increases, less of it will be required; therefore an increase in velocity affects the value of money in the same way as an increase in its quantity affects it. In general terms, then, the value of money varies inversely with its velocity, as well as inversely with its quantity.

This is not an easy matter to understand; an example may make it plainer; in trying to make the example simple, we shall necessarily make it somewhat artificial.

A certain man decided to employ a hundred unemployed at £1 per man per week; he housed the men upon his estate, and set up a store which was stocked with provisions worth £100 every Saturday night; on Sunday the men were paid and promptly spent all their wages, thereby emptying the store; each £1 bought a man's provisions for the week. The employer kept £100 in notes for the purpose of paying wages; there was thus a short period on Sunday when the whole of the £100 was in the possession of the men. One Wednesday night, the shed containing fifty men's provisions for the rest of the week was swept away into the sea during a gale, the provisions being lost entirely. The employer had the store filled with £50 worth of goods during the night and paid the fifty sufferers their wages, half a week early, before they began work on Thursday morning; the fifty men thereupon cleared the store

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of its provisions. Thereafter payment and expenditure were effected twice a week, half early on Thursday and half on Sunday. Then the employer observed that of the original £100 half never left his possession; the same £50 was paid out and received back on Thursday and paid out and received back again on Sunday. He therefore invested the idle £50, finding the scheme would work without it. In this case, the velocity of £50 doubled; it did the work hitherto done by £100; we may say, to use another word, that the *efficiency* of the £50 was doubled. It is evident that the employer no longer needed so much of his wealth in the form of money; his demand for money declined because the velocity of part of his money increased.

When we speak of the demand for money, we must be quite clear about what we mean: we do not mean the demand for wealth nor for income. Demand for the latter may be insatiable; demand for money is limited. We may want unlimited wealth; we do not want an indefinitely large proportion of our wealth in the form of money. When the employer found that he did not "want" the second £50 any more, that did not mean that he destroyed it nor gave it away; it meant that he did not want so much of his wealth in the form of money; he preferred the second £50 in the form of an investment which would earn interest.

This brings us to the question of why people want any of their wealth in the form of money; after all, money does us no good until we get rid of it. The matter was put very simply and clearly by the late Prof. Cannan. He explained¹ that the demand for money was a demand for money *to hold*. We require money to keep, in the bank, in the form of a deposit, or in the form of currency in our pockets. We need it in order to have the means of making our everyday purchases, and to have something available immediately, if possible, to meet a sudden emergency. The amount of money we hold varies; in many cases, it dwindles away until, as pay-day approaches, there is little or nothing left. But, *on the average*, everybody (except small infants) has something; everybody's average holding is the demand for money.

Now if we think about this carefully, we shall see that the demand for money to hold varies inversely with the *velocity* of

Edwin Cannan: *Money*, 1935, Part II, Section 2.

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circulation. The more quickly it passes from hand to hand, or the more frequent the pay-days and spendings, then the less money is required to be held at any time in order to buy the same amount of goods at the same prices. And if we increase the speed of money, keeping the quantity the same, that will have the same effect as a proportionate increase in the quantity of money while its speed of circulation remains the same; in either case, the value of money goes down or, the same thing in other words, prices in general go up.

The demand for money is not always the same. At Christmas, for instance, there is a marked increase in the demand for one sort of money, currency, to be held for only a short time before being spent on presents and festivities. The Christmas demand for currency is an example of what is called the seasonal variation in the demand for money. A more important seasonal variation is the one which occurs in agricultural countries, like Canada, when the crops are being harvested; then, within a short time, many of the inhabitants' yearly income is being paid all in one block. The demand for money to be spent in buying the crop becomes acute, and in fact the monetary authorities let the quantity of money increase at that season so as to stop the increase in its value which would occur otherwise; for it would be very inconvenient if prices in general were to fall noticeably for a short period every autumn.

If a decrease in the price for a commodity causes a more than proportionate increase in the amount of it sold, we say that the demand for the good is elastic; and, conversely, if a decrease in price causes a less than proportionate increase in amount sold, we say that demand is inelastic. Similarly, of course, with increases in price and the consequent decreases in demand. What about the elasticity of demand for money? We say that money's elasticity of demand is equal to one, or to unity; by this we mean that an increase in the value of money will cause an exactly proportionate decrease in the demand for it, and conversely that a decrease in the value of money will bring about an exactly proportionate increase in the demand for money to hold. If the volume of money held by the public is increased by 25% as the result of arbitrary action on the part of the monetary authorities, that is, if the volume is multiplied by $\frac{5}{4}$, then the general index will also be multiplied

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by $\frac{1}{2}$, and the value of money by $\frac{3}{4}$. The argument runs thus: if everybody's supply of money were suddenly doubled, then all prices would as quickly be doubled also; that is, its value would be halved. But this is what is called a static idea: at the first point of time (state 1), the volume of money was 100; at the second point of time (state 2), its volume was 200, its values being respectively 100 and 50. The world, however, does not move suddenly from one set of circumstances to another; in actual fact, the volume of money does not double during the night, but usually changes very gradually, and the effects of the almost unnoticeable increase are different according to the different parts of the monetary structure in which the increase may occur.

For instance, suppose that bankers create more money by giving credits to cotton cloth makers: the first thing that happens is that the price of cotton yarn goes up, because weaving firms have more to spend in buying the produce of spinners; receiving more money, spinners increase output and compete more keenly in the raw cotton market, so driving up the price of raw cotton, increasing the receipts of the cotton brokers and causing them to offer higher prices to growers, who thereupon put more land into cultivation. As these effects are occurring, the wages of workers may go up, which will increase the turnover of shops. In the end, the equalising effect of competition on profits will no doubt spread the rise of prices over all goods equally; that is to say, if one line of business is more profitable than another, producers will desert the less profitable lines and go in for the more profitable ones, so reducing the profits of the more profitable by their competition and increasing the profits of the less profitable by withdrawing their competition. But this only happens in the long run, and "*In the long run*" (to quote Mr. Keynes's immortal phrase¹) "we are all dead." Long before the final effects of giving additional credit to cotton weavers have worked themselves out, other short-run effects have dwarfed the former into insignificance. Economic life is the resultant of conflicting short-run effects. It is the study of the short run, of the gradual changes which we meet in real life, which is described as the dynamic approach; this is contrasted with the very theoretical static aspect of economic phenomena. The static

¹ J. M. Keynes: *A Tract on Monetary Reform*, 1932, page 80.

view has its uses in illustrating the principles governing economic relationships, but it is essentially an abstraction, a simplification, of which we cannot find exact examples in the real world where multitudes of conflicting tendencies operate simultaneously.

§ III

$MV = PT$. *Fisher's equations. Assumption of static conditions; the short-run transition. Perpetual transition? The scope of quantity theory.*

The idea that the value of money depends upon its quantity and its velocity of circulation is known as the quantity theory of money. Another way of putting quantity theory is to say that the price-level depends on the volume and velocity of money. The most concise form of expressing the idea was achieved by Prof. Irving Fisher who stated it as an equation: $MV = PT$,¹ where

- M equals the volume of money;
- V equals the velocity of circulation of money;
- P equals the price-level;
- T equals the volume of transactions.

It has been pointed out, indeed, that the equation is little more than a truism: suppose the volume of money is £1,000,000, and its average velocity of circulation is 10 per annum; then $MV = £10,000,000$ per annum; that is to say, annual expenditure is £10,000,000. But what is $P \times T$? T is the number of things sold per annum and P is their prices; if we multiply P by T, then, we get the value of annual sales. So all the equation states is that annual expenditure equals annual sales, and these, after all, are two names for the same thing. The equation does not prove anything, it was never meant to do. But it is an exceedingly useful way of stating quantity theory because it enables us to think with mathematical clarity and precision. Thus, we can compile a large number of propositions which are certainly true: we can say this sort of thing:

¹ Irving Fisher: *The Purchasing Power of Money*, 1911; especially Chapter II.

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1. If V and T remain constant and M increases, then P must increase.
2. If M and T remain constant and V increases, then P must increase.
3. If M and P remain constant and V increases, then T must increase.
4. If M and V remain constant and T increases, then P must decrease.

And so forth. Prof. Irving Fisher implied (largely, I think, for the sake of simplicity and convenience) that there were no *autonomous* movements on the part of P, but that it always changed as a result of a movement in one of the other terms. It has been argued since that P can start a movement and cause one or more of the other terms to adjust itself; this happens, for instance, if a wave of pessimism sweeps over all the markets, causing sellers to mark down prices.

When we speak of one of the terms bringing about a change in another, we must be quite clear what assumptions we are making tacitly. If all four terms remained constant, we should describe that as a condition of equilibrium, which never, of course, exists in the world of actuality. And when we supposed, in the propositions instanced above, that two of the terms remained constant, we are making the assumption of static conditions; when an economic quantity changes in our dynamic world, others do not stay put; they are affected and begin to vary too. But it is true that if these were a condition approximating to equilibrium prevailing and this was suddenly disturbed, let us say, by a large increase in M, after all the other terms had been profoundly affected thereby, there might appear a new condition of approximate equilibrium in which V had reverted to about its former figure and T also; the net effect would be an increase in P balancing the increase in M. This is, of course, all that Prof. Irving Fisher claimed that he had shown by his equation; that it illustrated the *ultimate* effects after the period of *transition* was over: "These permanent or ultimate effects follow after a new equilibrium is established . . . if, indeed, such a condition as equilibrium may be said ever to be established."¹

We have come back, in fact, to the position which we

¹ Irving Fisher: *The Purchasing Power of Money*, 1911, page 56.

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reached in the last section: the precise propositions (page 83) which we can derive from the equation, $MV = PT$, depend upon the assumption of stability in one or two of the terms of the equation, and this assumption is true to actuality only in the long run. In the short run, there is a period of transition, wherein all the terms are varying. And in the actual world, there are so many and so great impulses disturbing the tendency to equilibrium, that economic life is a permanent transition. Equilibrium is like to-morrow; it never comes; for as soon as the grey streaks of dawn appear, to-morrow means something else; as soon as the tendency to equilibrium has begun to compensate for some disturbance, something else happens and the equilibrium to which we are tending means something else. It is true that water tends to assume a roughly flat surface, but if we keep on throwing stones into a pond, we not only disturb the flat surface which it is trying to assume, we also make it try to assume a slightly different flat surface, since the level of the water alters as we fill up the pond with stones.

The quantity theory of money is a concept of long-run phenomena. It has its use in illustrating the forces at play, but it will not enable us to reach mathematical results in a short-run world. We cannot say, for instance, that if we add 10% to M, there will be, after a few weeks' transition, a 10% rise in P; the transition goes on for ever, and other disturbing factors always prevent our experiencing isolated long-run effects.

It should be mentioned that Prof. Irving Fisher provides several sets of identities in his elucidation of quantity theory.

If $E = \text{expenditure}$, $\frac{E}{M} = V$. Then he considers all prices which he calls p_1, p_2, p_3, \dots , and all quantities of goods sold, which he calls q_1, q_2, q_3, \dots , and these all add up to Q. Then $MV = SpQ = PT$. But when Prof. Irving Fisher speaks about money, he means what we have called currency, so that MV really takes no account of the biggest group of money which exists, that is to say, bank deposits. He therefore rewrites the equation to include all forms of payment as $MV + M'V' = PT$, P now meaning the price-level of all goods and not only those bought with currency; T, similarly, meaning all transactions and not only those effected with currency; and M' signifying the volume of bank deposits, and V' their velocity. Then it

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is suggested that M' always bears approximately the same relation to M . And this is but the beginning of a very interesting line of investigation; but the rest of Prof. Irving Fisher's enquiry is too specialised for even the most inadequate summary in the present elementary discussion.¹

BOOKS

Regarding Section 1, see D. H. Robertson: *Money*, 1935, Chapter II, which also covers some of the matter dealt with in the rest of our chapter.

Index numbers are discussed in many books, e.g. F. W. Taussig: *Principles of Economics*, 1927, Volume I, Chapter XXII, Section 1; R. C. Mills and E. R. Walker: *Money*, 1936, Chapter III, Section 5.

The two following references are to discussions of index numbers by statisticians: E. C. Rhodes: *Elementary Statistical Methods*, 1933, Chapter X; L. R. Connor: *Statistics in Theory and Practice*, 1934, Chapter XVI (a certain mathematical competence is necessary to appreciate the latter).

Particularly see also J. M. Keynes: *A Treatise on Money*, 1930, Volume I, Chapters VI and VIII.

Quantity in relation to velocity of circulation is discussed by F. W. Taussig: *Principles of Economics*, 1927, Volume I, Chapter XVIII, Sections 1 and 2; also by G. D. H. Cole: *What Everybody Wants To Know About Money*, 1933, pages 51-57.

Concerning the demand for money, see particularly Edwin Cannan: *Money*, 1935, Part II, Sections 1 and 2; and a very good discussion by H. Houston: *The Fundamentals of Money*, 1935, Chapter IX.

The concept of elasticity of demand equal to unity is dealt with by A. Marshall: *Principles of Economics*, Appendix F.

One of the really important contributions to the concept of the value of money along quantity theory lines is contained in Irving Fisher: *The Purchasing Power of Money*, as cited in the third section of our chapter. That publication is really essential to a proper understanding of the matter, but since it was written there have, of course, been considerable refinements in the theory of the value of money.

The most far-reaching examination of the value of money is contained in J. M. Keynes: *Treatise on Money*, Book II, but this is advanced work.

¹ The statistical chapters of *The Purchasing Power of Money* and the suggestions regarding the stabilising of the value of money are of particular interest.

CHAPTER VII

EQUATIONS OF THE VALUE OF MONEY AND THEIR APPLICATION TO THE TRADE CYCLE.

§I

Aim of the next two chapters. Theories of the value of money. The trade cycle. The general theory of employment, interest and money in Chapter VIII.

In the next two chapters we shall attempt to review the most important part of what is spoken of generally as the theory of money. Without doubt this is the most difficult matter in our study of the subject of money; yet we shall attempt to survey the difficult country at this early stage because, if we did not, much of what we have to say later would not appear with its proper significance. Without a sound basis of theory we should find monetary history a jumble of facts, whose relation to each other would not be plain. We should have no way, without our theoretical generalisations, of perceiving what was really important and what was not.

In the case of monetary policy, too, we should hear with our ears but should not understand. We shall say much regarding the gold standard, especially in Chapters IX, X and XVI, but we should not discuss it sensibly without our monetary theory in mind.

The same is true of the chapters devoted to monetary institutions and technique (XIII, XIV, XV). We should possess no means of judging how the system works, if we had no clear idea of how it ought to work; the basic ideas of this sort are drawn from our monetary theory.

Monetary theory is like a living thing; we may think of

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it as organic; for it has grown to its present form from what it was in the past; it has changed greatly in the post-war era, but it could hardly have taken its present shape if its earlier forms had not been what they were.

It is partly for this reason that we shall trace, in some measure, the history of monetary theory, by considering earlier theories first and the later ideas afterwards. The earlier will help us to understand the later ones, and we shall find that the older ideas are still important in themselves.

We must not suppose, indeed, that the last word has been written on the subject of monetary theory; without doubt the future will bring further clarification, though we must expect, perhaps, a bringing to light of fresh difficulties, and a tendency for theory to become more complex, rather than a grand, simplifying solution of our problem. As Sir Arthur Eddington wrote of his own branch of science, "I sometimes think that the progress of knowledge is to be measured not by the questions that it has answered but by the questions that it provokes us to ask."¹

What, then, is the nature of our problem? As it was seen in times gone by, the problem, in its theoretical aspects, seemed to hinge upon the value of money. Why had money value, in the sense of purchasing power? Why was its value not always the same? The answers were not very satisfying. Then the attempt to understand took a more direct approach: why was trade sometimes good and sometimes bad? That, after all, was what mattered; it mattered directly or indirectly to everyone. Profits and employment were sometimes high, and sometimes losses were general and unemployment rife. This alternation became known as the trade cycle, and it became the object of monetary theory to explain the trade cycle.

It is permissible to say that monetary theory became obsessed with the trade cycle; that writers made the mistake of concentrating attention upon it too much, so that they built up special trade cycle theories and lost sight of the wider issues to which their special theories ought to have been related. It is in Chapter VIII that we shall bring our monetary theory up to date, and there we shall find the parts of the monetary economy related to each other in a general theory

¹ *New Pathways in Science*, page 325.

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of employment interest and money—Mr. Keynes's general theory.

We must bear in mind the difficulty, an acute one, which we looked upon in the last chapter, namely, that the very idea of money having a general value is no more than an approximation. We shall see the equations which express the value of money in algebraical form altering in meaning: the verbal explanations of the equations speak of "the price-level", which fluctuates inversely with the value of money. But in the various equations the price-levels are different things, so that the value of money means different things also.

No one has contributed more to the understanding of the difficult subject of money than Mr. J. M. Keynes has done, and, except in one instance,¹ it is with his work that we shall be concerned in this chapter and the next one. In an introductory book like the present one, however, we cannot even touch upon all the contributions which he has made. It must suffice, at the moment, to attempt a summary, in a few words, of certain thoughts contained in: *A Tract on Monetary Reform* (1923), *A Treatise on Money* (1930), and, in Chapter VIII, *The General Theory of Employment, Interest and Money* (1936).²

Such a summary can do no more than suggest the nature of some part of his thought about money; the brevity of the summary entails inadequate delineation and some oversimplification. But our intention will have been fulfilled if the reader perceives for himself the reasons which make a study of the works cited above both necessary and interesting. In no sense can the following summary serve as a substitute for the originals.

¹ The equation $MV=PT$ in Section 3 of this chapter.

² The three works will be referred to as *The Tract*, *The Treatise* and *The General Theory* respectively.

EQUATIONS OF THE VALUE OF MONEY.

§ II

Equations of the value of money:

$n = pk$, and $n = p(k + rk')$; the income-velocity approach. The value of money examined in order to explain the trade cycle.

$P = \frac{E}{O} + \frac{I' - S}{R}$, and $\Pi = \frac{E}{O} + \frac{I - S}{O}$. Profits, savings, investment and income defined in unusual senses. Equilibrium with excess profits at zero.

We are concerned, in connection with the value of money, with only one section of one chapter of *The Tract* (Chapter III, Section 1). In restating the quantity theory,¹ Mr. Keynes uses the letters $n = pk$, roughly corresponding to $MV = PT$; here, n is the quantity of what Mr. Keynes calls cash, in the sense of currency; p is the price of a "consumption unit" (which we will call c); c is "made up of a collection of specified quantities of their (the public's) standard articles of consumption or other objects of expenditure";² c is, then, a complex consumption commodity, in the sense in which we use the phrase in statistics, as we did in the last chapter; and k is the number of consumption units over which the public likes to keep purchasing power available in the form of currency.

We might say, then, that n = the notes and coins of a community; c = a complex commodity representing total consumption per unit time (e.g. per day), divided by the population of the community; p = the price-level of c ; and k = the number of c 's which the public likes to have currency ready to purchase. Its currency must, then, amount to kp ; but its currency is, of course, n ; $\therefore n = kp$. As with $MV = PT$, the two sides of the equation are different names for the same thing.

But we are not interested in the price-level of things bought

¹ It is not entirely accurate to call this approach a restatement of the quantity theory; it is more usually called the income-velocity approach or the cash-balances treatment.

² *The Tract*, page 76.

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only with currency, wherefore Mr. Keynes rewrites the equation as $n = p(k + rk')$, where we "assume that the public, including the business world, find it convenient to keep the equivalent of k consumption units in cash and a further k' available at their banks against cheques, and that the banks keep in cash a proportion r of their potential liabilities (k') to the public."¹ Thus the equation, $n = p(k + rk')$, is somewhat similar to Prof. Irving Fisher's $MV + M'V' = PT$; but it is not quite the same thing, because the latter refers to the price-level of everything; P is the index number known as the transactions standard, mentioned in the last chapter; p , on the other hand, is the price-level of consumption-goods (the things real income consists of), so that n is not really the *total* volume of currency, but that part of the volume of currency which is kept by the public to spend on what it consumes and by the banks as cash reserve against those deposits, belonging to the public, designed for expenditure on income-goods; currency for spending on capital assets, or for backing deposits designed for capital transactions, is thus excluded from the equation. This approach is usually called the income-velocity theory of money. p may be described also as the income-balances standard, for the weights which would be used if such an index number were actually compiled would be derived from the amounts of income balances held against the complex consumption commodity.

"No critic of Mr. Keynes's work is more penetrating than Mr. Keynes himself, and, when n is described as being only a part of total currency, we are trying to put in a very short and simple manner the chief point of the criticism which he levelled at *The Tract's* equations when reviewing them in 1930 in *The Treatise*.²

p may be seen as the price-level of consumption-goods; it may be very important to study this, for if we find that p has gone up, say, from 100 to 102, during a period when the price-level of capital-goods has gone up from 100 to 120, we may be able to use this knowledge to explain why there are recurrent slumps and booms in business.

As we observed in Section 1, the fact that trade is sometimes brisk and sometimes slack, not from one year to

¹ *The Tract*, page 77.

² Chapter XIV, Section 1.

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another, but over a period of years, is known as the trade cycle. However much over-concentration there may have been on this subject, it remains true that the trade cycle is the great problem of economics: we shall maintain that it is a bad thing, because we see it as the proximate cause of the widespread miseries of unemployment; therefore we require to know why the trade cycle occurs and what policy we can pursue in order to stop it.

Because we want to know, then, exactly what a slump means in terms of business statistics, we are interested in price-levels. We want to know particularly what makes the various price-levels what they are, so that we can see what causes booms and depressions.

It was observed long ago that high and increasing prices occur in a boom, and that low and falling prices occur in a slump. But, at the moment, we must consider only the way in which the value of money can be treated, and leave the trade cycle until the third section of this chapter.

In *The Treatise* (1930), Mr. Keynes produced two "Fundamental Equations". The first of these was constructed to point out the factors which govern the price-level of consumption- or income-goods; it reads $P = \frac{E}{O} + \frac{I' - S}{R}$. P is the price-level of real income; we may describe it as a consumption standard for measuring the value of money; E is the earnings of the community in a period of time; O is the total output of goods of all sorts; I' is the cost of production of capital-goods; S is the amount of money saved out of money income in the period of time; and R is the output of income-goods.

Mr. Keynes derives this equation in the following way:

Let E be the total money-income or Earnings of the community in a unit of time, and I' the part of it which has been earned by the production of investment-goods, so that I' measures the cost of production of new investment and $E - I'$ the cost of production of the current output of consumption-goods.

Further, let S be the amount of Savings as defined above, so that $E - S$ measures the current expenditure of income on consumption-goods.

Let us choose our units of quantities of goods in such a way that a unit of each has the same cost of production at the base date;

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and let O be the total output of goods in terms of these units in a unit of time, R the volume of liquid Consumption-goods and Services flowing on to the market and purchased by consumers, and C the net increment of Investment, in the sense that $O=R+C$.

Let P be the price-level of liquid Consumption-goods, so that $P.R$ represent the current expenditure on consumption-goods and $\frac{C}{O} (=I)$ is the cost of production of new investment.

Then since the expenditure of the community on consumption-goods is equal to the difference between its income and its savings, we have

$$P.R = E - S = \frac{E}{O}(R + C) - S = \frac{E}{O}.R + I' - S;$$

$$\text{or } P = \frac{E}{O} + \frac{I' - S}{R},$$

which is the first of our Fundamental Equations.¹

Thus if P is to remain unchanged, the two terms on the right hand side must each remain constant,² a double condition which Mr. Keynes explains in the following words:

The price-level of consumption-goods (i.e. the inverse of the purchasing power of money) is made up, therefore, of two terms, the first of which represents the level of efficiency-earnings, i.e. the cost of production, and the second of which is positive, zero or negative, according as the cost of new investment exceeds, equals or falls short of the volume of current savings. It follows that the stability of the purchasing power of money involves the two conditions—that efficiency-earnings should be constant and that the cost of new investment should be equal to the volume of current savings.³

The second equation is very similar in form: it is:

$$II = \frac{E}{O} + \frac{I - S}{O};$$
 II is the price-level of everything, income-goods and capital-goods; I is different from I' , for I is the *value* of capital-goods produced; I' is their cost of production; so $I - I' (= Q_2)$ = the profits of the firms making capital-goods—

¹ *The Treatise*, page 135.

² Compensatory changes in the two terms will not take place spontaneously, as Mr. Keynes shows; on the contrary, a change in one of them will produce a like change in the other, with cumulative effect.

³ *The Treatise*, page 136.

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but "profits" in rather a peculiar sense, because there are included in I' , as part of the ordinary costs of production, such normal profits as will cause manufacturers to go on making their products on the same scale as before; so Q_2 we might call *excess profits*, which are so attractive that they cause manufacturers to *increase* the level of their output, or cause new firms to come into the lines of business wherein the excess profits are being made.

Mr. Keynes builds up the second equation as follows:

Let P' be the price-level of new investment-goods,
 Π the price-level of output as a whole,
and $I (=P'.C)$ the value (as distinguished from I' ,
the cost of production) of the increment of
new investment-goods.

Then

$$\begin{aligned}\Pi &= \frac{P.R + P'.C}{O} \\ &= \frac{(E - S) + I}{O} \\ &= \frac{E}{O} + \frac{I - S}{O},\end{aligned}$$

which is the second of our Fundamental Equations.¹

Thus, if things are to stay put, in equilibrium, I must equal I' , and Q_2 must be zero. Q_2 can, of course, be negative, which is the same as I' being greater than I ; that means that firms are making minus excess profits, or, in other words, that their actual profits are not up to normal standards; this causes them to decrease output. If Q_2 is negative, it may still be quite small, not large enough to eat away the whole of normal profits; on the other hand, of course, it may be negative and larger than normal profits; that is, the producers of capital-goods, on the average, make a net loss on the year's trading.

But so far we have talked about the makers of capital-goods only; income-goods makers also come into the picture. Their excess profits are called Q_1 , which equals $I' - S$, so that, if I' is greater than S , Q_1 is positive (more than normal profits), and, if I' is less than S , Q_1 is negative (less than normal profits). Now let us add up the two lots of excess profits, Q_1 and Q_2 :

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$Q_1 = I' - S$ and $Q_2 = I - I'$, $\therefore Q_1 + Q_2 = I' - S + I - I' = I - S$, and this Mr. Keynes calls Q (without a suffix). If $I = S$, no excess profits are made; profits are normal; the volume of output does not change; equilibrium exists.

These elaborate equations may seem somewhat difficult to focus in the mind, but if we look at them carefully, we shall see that they are reasonable. Considering $P = \frac{E}{O} + \frac{I' - S}{R}$, P would go up if E increased with O stable and the whole of the second term constant? E represents earnings or money income, and O represents output; if income increased while the things which income could be spent upon were as before, then the prices of some or all items composing output must increase. This must happen unless the increment of income were saved without being offset by an increased cost of production of new investment, that is, unless the second term, $\frac{I' - S}{R}$, turned negative. Suppose $\frac{I' - S}{R}$ were to turn positive

from zero, with $\frac{E}{O}$ unchanged, that is, suppose there were less saving compared with the amount of money spent in producing capital-goods: then more money must pass through the other outlet, namely, expenditure on consumption-goods; such a change must obviously raise P , the price-level of consumption-goods.

We could test the second equation in the same simple manner, and we should find in this case too that the effects of varying the terms on the right hand side of the equation were consonant with our ordinary fundamental idea that prices go up if more money is exchanged for the same amount of goods.

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§III

The trade cycle: equations in action:

- (i) $MV + M'V' = PT$; the first attempt: limited results.
- (ii) $n = p(k + rk')$; the impossibility of getting accurate figures. The possibility of an interpretation along quantity theory lines.
- (iii) $P = \frac{E}{O} + \frac{I' - S}{R}$ and $\Pi = \frac{E}{O} + \frac{I - S}{O}$. the divergence of "savings" and "investment" as the motivator. Sales of securities by business men. The vicious spiral. The reaction of income on savings. Falling price-levels in equilibrium due to progress. The cumulative process. The identity of the desired equilibrium.

Now, the reason for these equations begins to become clear: they all show us what sort of changes make prices go up and down, and, conversely, if we see prices (as shown by index numbers) going up or down, then, by thinking of the equations, we should have a pretty shrewd idea of the reason. Suppose prices have gone from 100 to 120: let us parade the equations and consider what alternatives they suggest.

(i) $MV + M'V' = PT$. Either one, or both, of the volumes of money (M and M') must have gone up; or one or both of the velocities; or else T has gone down. But, in fact, it is likely that each one will have increased—even T , for higher prices usually go together with brisker trade.

Now it should not be impossible to make a reasonably accurate estimate of M ; for M is composed largely of notes, and, since notes are usually the liabilities of some bank or other, they probably occur in bank balance-sheets; similarly with M' since this stands for deposits. There is nothing so definite to guide our enquiry concerning T , but we should get some idea of this term if we consider the volume of production and the volume of imports. V is very difficult, but it is similar to and not of so great importance as V' , and the latter can be evaluated with tolerable accuracy by considering the total value of all cheques cleared through the

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banks. We must remember that P is only a rough indication of the price-level, but we have worked out *all* the terms of the equation; we can then check our calculation by observing whether the left side of the equation equals the right side; if the two sides are almost the same, we cannot say, of course, that all our estimates are sound, for we may have made two or more errors which compensate for each other; but we shall at least be in a position to say that there is no evidence that we are wrong.

Now suppose we find that P has gone up because M and M' have gone up; if the monetary authorities want P to go down again, they can, since the power is theirs, decrease M , and that will bring down M' because banks keep a volume of currency (M) in roughly constant proportion to their deposits (M'); the only way, then, in which they can preserve the proportion, when their M is reduced, is by decreasing their M' .

But suppose it is an increase in V and V' which causes P to advance: what can authority do then? Reduce M so as to compensate? If they do so, suppose V and V' increase still further, leaving P unchanged at 120: what does authority do about that?

It is clear, surely, that the use of the equation in suggesting appropriate lines of policy has limits. What alterations in V and V' really prompt us to do is to ask why these terms have changed. Here the equation has no suggestion to offer; it goes no deeper. In fact it does not go deep enough; it has its uses, but they are limited.

(ii) Let us consider the next one, $n = p(k + rk')$. If p is the price-level of consumption-goods, we must now suppose that it is this price-level (and not the general one) which has advanced from 100 to 120. We cannot get very far in this case: it might be that k and k' have gone down on balance, with n and r unchanged; or that k and k' and r are stable, with n increased; or that k and k' have gone up, with a much bigger rise in n , and with r stable; or that r has gone down with the other terms unchanged. A decrease of n , with a much larger decrease in k and k' , would be unlikely.

If the public took to holding deposits instead of currency for their prospective purchases, that would be reflected in the fact that k' increased by the amount that k decreased; since any

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addition to k' is multiplied by r , which is usually about $\frac{1}{10}$, a "flow" of consumption units from k to k' entails an increase in p , unless r increases or n declines in a degree sufficient to offset this movement. Transfers from k to k' are likely to be slow, but movements the other way may be of great importance.

But, unfortunately, we are not able to collect sufficient (independent) information about the terms: we might discover that m (the total stock of currency) had increased, and so suspect that n would be greater, but we could not obtain any figures for it; p we can ascertain roughly since there are adequate indices of income-goods prices; and r can be worked out from bank balance-sheets; but k and k' defeat us. For these two quantities are the two volumes of consumption units which people wish to be able to buy with (i) such ready currency in their actual possessions as is kept for expenditure on income, and (ii) such of their bank deposits as they do not treat as savings. And we have no means at all of discovering these two volumes of consumption units.

It is clear, then, that we are going to get nothing very definite from this equation. Of course, if we were to alter the meaning of the terms and say that pk was *all* the currency held by the public (and not merely the part held for consumption expenditure), and likewise that pk' was total deposits, so that n ($=m$) was the total currency of all holders, then we might use the equation in much the same way as $MV + M'V' = PT$.¹ It would yield some rather different ideas, but again we should find that it did not go deep enough.

(iii) With the two equations: $P = \frac{E}{O} + \frac{I' - S}{R}$, and $I' = \frac{E}{O} + \frac{I - S}{O}$, we get rather different results; we find a convenient method of describing the trade cycle.

If P moves from 100 to 120, this is probably due, at least in the first instance, to I' exceeding S . Now saving equals income minus expenditure on consumption, but "income" is rather a curious thing because, as Mr. Keynes defined it in this instance, it includes *normal* profits of entrepreneurs; if they have not made normal profits, it follows that "saving"

¹ But for the term "consumption unit", it might seem that Mr. Keynes intended it to be used in this sense.

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includes their extraordinary losses, that is to say, the amount by which their profits fall short of normal.

What does this mean in simple words? It means that, when business men are not making all the profits expected, they sell some of the securities which form the general reserve of their firms, and this is what some of the savings of the public are spent in buying. The point is that S , the savings, are not spent entirely on *new* investments, that is, in purchasing current output of capital. (It is true, of course, that any particular saver may purchase an old security on the stock exchange, but his purchase will put someone in funds; if the latter also buys old securities, the money saved may pass to someone else, and so on; but if the equality of savings and investment is preserved, the money saved will eventually be spent by someone on a new investment.)

But if some savings leak away out of the stream of expenditure on current capital output in this way, it is clear that the makers of current output are not going to receive back (collectively) all that they have spent in producing current output. It used to be said¹ that total demand must always be equal to total supply, but now we begin to see that this may not be so in all cases; it used to be argued that supply and demand in terms of money were two names for the same amount, since all costs incurred in producing the supply went to make up someone's gross income, and all the net costs (not counting the amounts paid by one entrepreneur to another), which made up the value of new output, were the same as the net income of the community. But this is not true if consumers buy the securities which business men sell, because their sales receipts are falling off and they are thus making losses.

This is the rather obscure event underlying the situation represented in our equations by S exceeding I' (or S exceeding I , for the latter is a parallel case). We must remember always that "savings" include this amount by which actual profits fall short of normal, expected profits.

Now when S exceeds I' , business men, by reason of their losses, can no longer continue to produce on the same scale as hitherto; they cannot easily decrease their capital equipment; it will not wear out just at the right time for them; so what they do is to cut down expenses on the "elastic" factor

¹ Here we are following the ideas of *The General Theory*.

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of production; in other words, they discharge men from employment. But such a process must decrease the amount of earnings (the E of the equations), and that will occur before O falls off; thus $\frac{E}{O}$ begins to decline when $\frac{I'-S}{R}$ (and $\frac{I-S}{O}$) are already minus quantities; wherefore P and II decline all the faster.

This is what is called the vicious spiral of deflation, and the opposite process is the vicious spiral of inflation. In the former, as the price-levels fall, the goods must be sold at a loss whose production was begun when higher prices ruled and were expected to prevail at the time of sale. This is why manufacturers check output and restriction schemes grow up: such practices constitute an attempt to decrease O so as to raise the value of $\frac{E}{O}$; but they are likely to avail little while $\frac{I'-S}{R}$ (and $\frac{I-S}{O}$) continue to be negative. The slump, in fact, goes on until the people have become so poor that S falls to the level of I and I'; indeed it is necessary for S to fall below that level before the phase of recovery begins; $\frac{I'-S}{R}$ (and $\frac{I-S}{O}$)

then become plus amounts; perhaps $\frac{E}{O}$ is still falling, but very soon the increase in the former outweighs the fall in the latter, so that P and II go up, whereupon excess profits begin to occur on a considerable scale, and everything is set for the boom; but this will continue only so long as S remains below I and I'.

Now when we began to examine the third set of equations, we said, without giving any reason for it, that a fall in P would be due to S exceeding I'. This was because we wanted to sketch the way in which the trade cycle occurred. But P might fall because E remained constant and O increased, with the second term, $\frac{I'-S}{R}$, remaining constant at zero; for we know that improved methods and inventions do enable more to be produced for the same expenses of production; that is the story of progress. Therefore P (and similarly II) may fall slowly without involving a slump, the fall registering the rate of progress. This would be, in general, only a small fall (compared with a slump fall in prices), sometimes estimated at about 3% per annum.

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We must not suppose that $\frac{I'-S}{R}$ (or, $\frac{I-S}{O}$) must remain absolutely fixed at precisely zero from day to day; but its movements must not be large enough to make entrepreneurs (as a whole) decide to alter the scale of their output, and during the whole period of approximate equilibrium the trifling values (positive and negative) of the equations' second terms must add up to nothing. Otherwise we get what are called "cumulative processes", that is, profits creating more profits and these creating still higher (excess) profits, and so on until the boom bursts in a shower of sparks and crisis failures, heralded by the sharp crack of the stock exchange; and, in the reverse sense, losses bringing greater and greater losses until what might be called the "half-dead equilibrium" of the slump is established, from which boom conditions gradually emerge again.

But let us be critical: why should not $I=I'=S$ in the half-dead equilibrium of the slump, with unemployment large and stable, and output well below the potential? In fact, that might be so, and Mr. Keynes overlooked this¹ in *The Treatise*. The equilibrium in which we are interested, and to bring about which we want to devise the appropriate policy, is not, therefore, *any* equilibrium wherein $I=I'=S$. It is the optimum one of a series, wherein unemployment is negligible. There is, indeed, something missing in the analysis of *The Treatise*, although it supplies (*inter alia*) a useful apparatus for describing in brief the process of the trade cycle. In repairing this omission, we shall have to desert the terms of *The Treatise*, in particular the unusual definition of income, and find the fuller explanation in the broader discussions of *The General Theory*.

¹ *The General Theory*, page 242.

CHAPTER VIII.

MR. KEYNES'S GENERAL THEORY

The volumes of employment and of output are the quantities which matter. "Involuntary" unemployment defined. The three determinants: the propensity to consume, the schedule of the marginal efficiency of capital, and the schedule of rates of interest; their fluctuations. The necessary identity of savings and investment. The fluctuation of savings resulting from fluctuations of income. "Involuntary" investment. Conventional interest rates. The instability of prospective profits. Liquidity-preference; its fluctuations and their effects. The quantity of money, and the effects of changes in it.

We saw in the sixth chapter that the value of money derived from the demand for it. Something akin to this forms the subject of a considerable part of *The General Theory*. But Mr. Keynes enquires about the demand for money (and for securities of different sorts) only in order to explain the things which really matter, namely, the volume of employment and the volume of output. He shows why it is that there may be a tragically large proportion of the working population in involuntary idleness—"involuntary" in the sense that the unemployed would willingly accept employment, if they could find it, at lower real wages than employed men are receiving.

He shows that the state of employment depends on three things. These he calls (i) the propensity to consume, (ii) the schedule of the marginal efficiency of capital, and (iii) the schedule of rates of interest. But this is true only if we can assume (as we usually can do quite properly) that other determinants in the economic system may be expected to remain stable; and these three independent variables are themselves capable of further analysis.

We can think of the propensity to consume as being a proportion, let us guess $\frac{2}{3}$, of current monetary net income; this means merely that the public consumes $\frac{2}{3}$ of its income. But the propensity to consume does not remain always the same. How and why does it fluctuate? The most important case is that it decreases as income increases; more precisely, that, as income increases, consumption increases also but not by so large a proportion.

This is a matter of common experience. If we suddenly become richer, we are in a position to re-plan our expenditure on a grander scale. Very many people possess some unfulfilled desire which cost ordinarily prohibits: A wants to go to the Dalmatian coast for a holiday, B to buy a car, and C to give £50 to a charity whose good work has long appealed to him strongly. Many people, enjoying greater affluence, will satisfy such a long-standing wish, but few will spend all of their increase in income. Some, buffeted by the waves of disappointment, will feel that a big part of the increase should be laid aside, perhaps simply because the greater income feels too good to be true; they are almost afraid of it; or perhaps because they are naturally cautious, which is the same thing as saying that their long-standing desire is to achieve security. Others merely feel that they would like to have some money to play with, and, so much do they enjoy planning how they will play with it, that, in the end, they never do play with the whole thing; a few will play with only a little of it, and a fraction with none at all. In very ordinary ways like these, then, increased income tends to be spent in a less proportion than the lower income of earlier times. Or, using Mr. Keynes's words, we may say that the propensity to consume declines as income increases.

The two schedules are time schedules. Apart from considerations of risk arising from the purpose of the borrowing, the longer the time before the repayment of a debt the higher is the rate of interest which must be paid on it. An example of this may be seen in the borrowing of the British government: when the great conversion operation was carried out, in August 1932, the government was virtually borrowing money, for repayment after 1961, at $3\frac{1}{2}\%$ (since those possessing 5% War Loan were entitled to be paid back instead of having their stock converted); the same week it borrowed

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money for repayment in three months' time at just over 1%. Thus, although we speak shortly of "the" rate of interest for convenience, there is really an indefinitely large number of rates corresponding to the indefinitely large number of periods of time for which money can be borrowed. Considerations of risk, like the risk of auriferous ore being exhausted in a gold mine, are always involved as well, but we are not concerned with them here.

We must not say, indeed, that short-term interest rates are always lower than those on securities whose repayment date is relatively distant. When investors feel very confident in the general stability of dividends and interest, they may consider that short-term bonds would be a nuisance; securities in which their funds could be left safely for a long time might seem less trouble; the rapid changing from one security to another might, at the same time, offer little scope for ingenious profit-making. Such conditions were not uncommon during the last century. But in more modern times, when the future seems more uncertain, we can perceive the advantage of the earlier repayment date simply enough: if a man can feel that at the end of next year he will definitely get back the whole of his invested money, he is in a safer position than another man who has to depend upon selling his securities on the stock exchange where their value may fall heavily. And the more people bid for the attractive short period investments, the lower becomes their rate of interest.

The marginal efficiency of capital is, roughly speaking, the profit which business men expect from new investment; here again, there is not a unique rate, but a time schedule of them depending upon the period for which the investment lasts.

Now if the various profit rates which make up the schedule of the marginal efficiency of capital lie above the schedule of interest rates, investment becomes profitable. It is not necessary, of course, that every rate in the former schedule should be above the corresponding one in the interest rate schedule: the conditions of investment expected to be profitable will be present if some part of what we may alternatively call the prospective profit schedule is above the interest rate (the cost of borrowing) schedule.

So, in the language of *The Treatise*, we should say that investment would exceed saving. But in *The General Theory*,

Mr. Keynes uses these terms in the more usual senses; income includes the actually realised net profits of producers, not their normal profits; saving is, therefore, always equal to investment, since saving = income - consumption and investment also = income - consumption. This sounds odd after the wording of *The Treatise*, but it is necessarily true since the amount of saving is in fact determined by the amount of investment.

For the amount of investment has an effect upon income. We may imagine that (in any period of time; this we will call a year) the members of a community desire to save £1,000,000 out of an estimated income of £6,000,000, but that in the period in question investment is taking place at the rate of only £200,000 per year. Now if this is so, and assuming that the volume of consumption-goods coming forward on to the market remains stable, then large losses are going to be made; the community is trying to save £1,000,000 and output is coming forward at the rate of £6,000,000 a year; but output can only yield a return at the rate of £5,200,000 per year; the result must be firstly a drop in the income of producers and then the discontinuance of a certain amount of production, so that men are thrown out of employment; in these two ways the public income is reduced.

The important point is that the reduction of income and employment and output is the normal channel whereby the "excessive"¹ savings are reduced. We must now show that a reduction of income does involve a decline in savings in the ordinary course of events. We will show this by demonstrating that the situation which would arise if savings did not fall is one which we do not experience in reality. Thus, if the rate of savings remained constant despite a reduction of income, losses would continue, with nothing to stop them, since the income of the later period would always be below that of the earlier period and since the produce of the earlier period cost the income of the earlier period to produce and is sold for the income of the later one; thus the difference between the earlier and later incomes must measure the losses of producers;² the losses would continue, always causing a reduc-

¹ "Excessive" only if we regard the rate of investment as given and unalterable.

² The statement of the matter with reference to periods is artificial, but it illustrates the underlying principle more clearly than a more strictly accurate statement can do.

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tion of output, employment and income, until total net income fell down to the level of savings, at which time the value of the community's consumption would be nil. This is evidently nonsense: in the world we live in savings do not remain rigid; they fall as income falls.

If we are going to be accurate, however, we must not think of investment doing all the causing and saving suffering all the effects. Let us imagine a community in the happy state of full employment; that is to say, no involuntary unemployment exists (and, if it is a community like the nations of to-day, the schedule of interest rates would be very low): suddenly saving increases and losses and unemployment result; then the discerning government, perceiving these things, at once begins a programme of public works (whose plans wisdom had prepared in detail beforehand). In this case, the increased rate of saving can persist without a cumulative disturbance of equilibrium, for the fact of its increase has caused the government to increase the rate of investment in corresponding degree.

We must be very careful to realise just what sort of things may lie concealed, so to speak, beneath the equality of saving and investment. Take the case, for instance, where saving increases and losses result: it is true that investment keeps pace, but part of that investment will consist of holding the excessive stocks of goods which entrepreneurs are anxious to sell, but cannot do because the public's income is falling, so that the dealers or makers must, perchance take them into stock. We might coin a new expression and call such a process "involuntary investment"—this would be zero, of course, in equilibrium.

We ought also to glance briefly at the opposite case, wherein the equality of savings and investment is maintained despite the forces tending to make them different. Suppose there is a state of "half-dead equilibrium", wherein the value of output, and the community's income and the volume of employment are all stable, but a proportion of involuntary unemployment exists: suddenly the propensity to consume increases—which is the same thing as saying that people try to save less than before. Excess profits result: and, unless saving increases, excess profits are going to continue until the volume of output expands so much that all involuntary un-

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employment has disappeared, and prices are going up and up and up in the astronomical terms of hyper-inflation. And this does not happen either. So we can conclude that the rate of saving depends chiefly upon the community's income, and that the two move together, but that the proportions in which savings fluctuate are larger than the contemporary fluctuations in income; and, further, that savings and investment (in the new senses) are always equal.

The schedule of interest rates is a very conventional matter. Central banks, it is true, publish a "Bank rate" or "rediscount rate" at which they are prepared to purchase assets of a specified type from the members of the money market, and to that extent they may directly prevent the rates in question rising above a certain figure. But these are all short-term rates, those, that is, payable on bills of exchange and on other assets which are due for repayment within three months. Thus the rates on assets whose repayment dates are years ahead are influenced only indirectly, and by devices other than Bank rate.

It is almost certainly true that the great bulk of investors expected before the great depression, and some no doubt still expect, pure long-term interest rates¹ at the 4%-5% level of former years, and there can be little doubt that such a level would occasion a hideous proportion of involuntary unemployment, since prospective profit rates are unlikely to alter upwards to a marked extent. We have seen already, in the post-war period, how unemployment can remain chronic; if the feeling had not prevailed, both among the public and in the minds of the monetary authorities, that there was something proper and usual in long-term rates of 4%-6%, we might have been spared a terrible chapter of suffering.²

In listing the schedule of prospective profits as one of the determinants of the volume of employment and of output, we are clearly introducing a factor subject to the sudden varia-

¹ A "pure" interest rate is one paid by those whose ability and willingness to repay the debt on due date is undoubtedly, it is a rate, that is, in which the risk of non-repayment is estimated at nil. Most rates of interest, of course, include a proportion which is equilibrated to the estimated risk of the undertaking.

² Appropriate monetary action would, unless universal, have entailed the abandonment of the gold standard, with which we deal in the following chapter.

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tions of men's moods. For prospective profits (if we may continue to use a less scientific but more readily comprehensible expression instead of "the schedule of the marginal efficiency of capital") are only expectations, mere estimates of an uncertain future. But, in the face of the unknown, the schedule of prospective profits takes a certain stability from what is known of existing conditions. As the text of *The General Theory* says:

It would be foolish, in forming our expectations, to attach great weight to matters which are very uncertain. It is reasonable, therefore, to be guided to a considerable degree by the facts about which we feel somewhat confident, even though they may be less decisively relevant to the issue than other facts about which our knowledge is vague and scanty. For this reason the facts of the existing situation enter, in a sense disproportionately, into the formation of our long-term expectations; our usual practice being to take the existing situation and to project it into the future, modified only to the extent that we have more or less definite reasons for expecting a change.

The state of long-term expectation, upon which our decisions are based, does not solely depend, therefore, on the most probable forecast we can make. It also depends on the *confidence* with which we can make this forecast—on how highly we rate the likelihood of our best forecast turning out quite wrong. If we expect large changes but are very uncertain as to what precise form these changes will take, then our confidence will be weak.¹

By this time, a discerning reader will have begun to have misgivings: if this chapter concerns the latest and most penetrating thought upon the subject of economics in general, and upon money in particular, what was the preceding chapter worrying about? If the three vital determinants are the propensity to consume, the schedule of the marginal efficiency of capital, and the schedule of interest rates, why all this palaver about the quantity and value of money? These are the reasons: the three independent determinants are capable, as we said at the beginning of this chapter, of further analysis. The quantity and value of money are factors in such a deeper investigation; indeed, it may be admitted that our three variable determinants are only *proximate causes* of the volume of output (or national income) and of employment. But the volume

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and value of money are not ultimate and unique causes and they operate through the causes we have discussed.

Yet a considerable part of *The General Theory* is occupied in discussing, in a novel manner, the demand for money, which is the co-determinant (with the quantity of it) of money's value.

Mr. Keynes, indeed, abandons the term "demand for money" because, as he shows, it is misleading. For the demand for money is not something unique; it is a species of a numerous genus. The genus is the demand for *liquidity*; the demand for money is only the extreme case of this sort of demand. He points out that interest is not, as has usually been stated by earlier writers, the reward for (or price of) *waiting*; it is not the remuneration necessary to call forth saving; for a man can save currency, hoarding it, for example, in the traditional stocking, and obtain thereby nothing in the way of interest. Interest is really the reward for surrendering liquidity, for dispensing with the convenience of holding ready money immediately available for any expenditure, either on consumption or on capital-goods. Interest is the price (if another form of words is required) for immobilising our savings, and the longer the time for which they are immobilised, the higher the rate of interest.

Now money is the most liquid or mobile of all assets; but we must not divide assets into two classes, mobile and immobile, as those people are in danger of doing who talk about the demand for money; for there are degrees of illiquidity: we shall generally require a larger rate of interest per annum for locking up our resources for ten years than for locking them up for one. We should, therefore, conceive of a "schedule of liquidity-preference", a table which would indicate for how long investors feel inclined to lock up their resources, given the schedule of interest rates prevailing in the market at any moment.

We shall understand the concept of liquidity-preference more easily if we ask what happens if the schedule thereof changes. The day's news suggests the fear, let us say, of war in Europe before the year is out; many will be inclined to sell their bonds quickly; instead, they buy, perhaps, treasury bills which are due for repayment in three months' time. The effect of such an operation is to widen the gap between long-

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term and short-term interest rates; and such an effect may be very large, for the fear of war makes men expect higher interest rates, and then no one will be willing to hold securities which he anticipates being able to buy back later at a lower price after the rates of interest have advanced; for the stock exchange value of any bond varies in inverse proportion to the rate of interest appropriate to the duration of the bond; so that, if the rate of interest in question advances from 4% to 5%, a bond quoted at 100 in the first instance will fall to 80; such a movement generally takes some time, and the quotations are subject to other influences, but these are usually of relatively small effect, anyhow over a considerable period of time.

If, then, the threat of war is serious, or if confidence is very shaken for some other reason, we may get a "flight" from long-term debts into short-term ones, so that the interest rates on the former go up and those on the latter down. At the same time, the schedule of prospective profits suffers. Thus, if there was some sort of equilibrium before, it will be rudely upset, for its maintenance depended upon a rate of investment whose determinants were the schedules of prospective profits and of interest rates; if, then, the former schedule has fallen and the long-term part of the latter increased, the rate of investment must fall. Savings will be decreased also, but only by reason of lowered income and output and increased unemployment.

The schedule of liquidity-preference, then, may act as the villain of the piece, causing a deflationary movement which will be cumulative for a time—and perhaps the fears, which caused liquidity-preference to change, were groundless all along.

Conversely, liquidity-preference may be the agent of recovery. The feeling may spread that investment on longer term is safer than formerly: long-term investments are bought and the long-term rates of interest fall accordingly. Prospective profits may remain unaltered, but investments calculated to yield 6% become very attractive with a rate of interest of 3%, whereas they were not worth the risk if borrowing could be effected only at 5%. Thus investment grows, and therewith prosperity.

Finally, we have to enquire what other major influence

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regulates rates of interest. We have said above that interest rates are highly conventional factors, and this has been more particularly true of long periods of time. Changes in the schedule of prospective profits and in the schedule of liquidity-preference are more particularly relevant to the phases of the trade cycle. But there is one factor which may operate upon interest rates for short, intermediate or long periods; this factor is the quantity of money.

It is not clear, at first, perhaps, that this is a channel through which the quantity of money operates, and, indeed, it is not the only channel. But if we are too obsessed with the ideas of the quantity theory, we might argue that an increase in the quantity of money would depress its value, causing brisker trade and higher interest rates. But that would be a false approach: it is by lowering interest rates that an increased volume of money leads to better trade; to the extent that interest rates rise, the effects of the increased volume of money are offset.

This proposition seems more natural if we turn our thoughts away from traditional monetary theory back to the very simple generalisations of supply and demand enunciated as the theory of value. (Mr. Keynes chastises effectively those who have been guilty of propounding monetary theories inconsistent, or at least unconnected, with their own generalisations concerning value.) If we do this, we shall say that, as the supply of money increases, the terms on which it is loaned to borrowers must decline—other things remaining the same; this would be true also of houses or of anything else customarily hired; or we can put the matter more precisely and say that, if the schedule of liquidity-preference remains unchanged, competition will take place among those who want to get rid of the additional money created, let us suppose by the central bank. The way to get rid of money is, in this sense, to find someone to borrow it, and the way to effect this is to lower the cost of borrowing. This is the manner in which an increased volume of money operates. But it is clear that, if interest rates were low already and business stagnant, an increased quantity of money might be offset by a change of liquidity-preference; indeed, the deflationary effects of the latter change might be upon a scale more than enough to offset the increased volume of money. If such appeared to be

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the state of affairs, it would be unfortunate if the monetary authority concluded that the policy of increasing the volume of money was abortive—although it does not follow, of course, that an enhanced rate of increase of the quantity of money is necessarily the policy wisest in any particular circumstances.

The quantity theory of money was inadequate because it concentrated attention upon the effects of the volume of money upon the propensity to consume: an increase of money will tend to produce more spending, but the quantity theory glossed over the important difficulties by picturing the propensity to consume as an amount, that is, by comparing expenditures of different periods as sums of money instead of comparing them as the proportions spent of the incomes of the different periods. If income increases by reason of the government paying for higher expenses by printing inconvertible notes (an increase in the volume of money), expenditure will naturally be higher. We may say that this is a second channel through which the volume of money affects the intensity of economic activity, but we must not forget that, whilst expenditure may be larger because of an increase in the volume of money, the proportion of income finding its way into expenditure for consumption will tend to decrease.

It is true, also, that increasing the volume of money may have an effect through a third channel. The feeling might be struggling to gain ground, for instance, that a slump had "touched bottom"; the announcement of an expansive monetary policy might then have the effect of changing swiftly the schedule of the marginal efficiency of capital; so that, with rates of interest unchanged or advancing less than proportionately, the volume of employment and later of output would begin to increase cumulatively—for a time.

The announcement of a sudden change to an expansive policy might even be so closely identified in the public mind with the prospect of better trade, that the propensity to consume would increase in anticipation—and that anticipation would not be disappointed.

But revival from depression comes, as a rule, only slowly and not suddenly; and it is important to perceive the reasons why an interval of slump conditions occurs so regularly between the collapse of a boom and the beginning of recovery. Why is there this period, frequently two or three years in

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length, which we have described as the half-dead equilibrium of the slump? Mr. Keynes says:

We have seen above that the marginal efficiency of capital¹ depends, not only on the existing abundance or scarcity of capital-goods and the current cost of production of capital-goods, but also on current expectations as to the future yield of capital-goods. In the case of durable assets it is, therefore, natural and reasonable that expectations of the future should play a dominant part in determining the scale on which new investment is deemed advisable. But, as we have seen, the basis of such expectations is very precarious. Being based on shifting and unreliable evidence, they are subject to sudden and violent changes.

Now, we have been accustomed in explaining the "crisis" to lay stress on the rising tendency of the rate of interest under the influence of the increased demand for money both for trade and speculative purposes. At times this factor may certainly play an aggravating and, occasionally perhaps, an initiating part. But I suggest that a more typical, and often the predominant, explanation of the crisis is, not primarily a rise in the rate of interest, but a sudden collapse in the marginal efficiency of capital.

The later stages of the boom are characterised by optimistic expectations as to the future yield of capital-goods sufficiently strong to offset their growing abundance and their rising costs of production and, probably, a rise in the rate of interest also. It is of the nature of organised investment markets, under the influence of purchasers largely ignorant of what they are buying and of speculators who are more concerned with forecasting the next shift of market sentiment than with a reasonable estimate of the future yield of capital-assets, that, when disillusionment falls upon an over-optimistic and over-bought market, it should fall with sudden and even catastrophic force.² Moreover, the dismay and uncertainty as to the future which accompanies a collapse in the marginal efficiency of capital naturally precipitates a sharp increase in liquidity-preference—and hence a rise in the rate of interest. Thus the fact that a collapse in the marginal efficiency of capital tends to be associated with a rise in the rate of interest may seriously aggravate the decline in investment. But the essence of the situation is to be

¹ It is often convenient in contexts where there is no room for misunderstanding to write "the marginal efficiency of capital", where "the schedule of the marginal efficiency of capital" is meant.

² I have shown above (Chapter XII) that, although the private investor is seldom himself directly responsible for new investment, nevertheless the entrepreneurs, who are directly responsible, will find it financially advantageous, and often unavoidable, to fall in with the ideas of the market, even though they themselves are better instructed.

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found, nevertheless, in the collapse of the marginal efficiency of capital, particularly in the case of those types of capital which have been contributing most to the previous phase of heavy new investment. Liquidity-preference, except those manifestations of it which are associated with increasing trade and speculation, does not increase until *after* the collapse in the marginal efficiency of capital.

It is this, indeed, which renders the slump so intractable. Later on, a decline in the rate of interest will be a great aid to recovery and, probably, a necessary condition of it. But, for the moment, the collapse in the marginal efficiency of capital may be so complete that no practicable reduction in the rate of interest will be enough. If a reduction in the rate of interest was capable of proving an effective remedy by itself, it might be possible to achieve a recovery without the elapse of any considerable interval of time and by means more or less directly under the control of the monetary authority. But, in fact, this is not usually the case; and it is not so easy to revive the marginal efficiency of capital, determined, as it is, by the uncontrollable and disobedient psychology of the business world. It is the return of confidence, to speak in ordinary language, which is so insusceptible to control in an economy of individualistic capitalism. This is the aspect of the slump which bankers and business men have been right in emphasising, and which the economists who have put their faith in a "purely monetary" remedy have under-estimated.

This brings me to my point. The explanation of the *time-element* in the trade cycle, of the fact that an interval of time of a particular order of magnitude must usually elapse before recovery begins, is to be sought in the influences which govern the recovery of the marginal efficiency of capital. There are reasons, given firstly by the length of life of durable assets in relation to the normal rate of growth in a given epoch, and secondly by the carrying-costs of surplus stocks, why the duration of the downward movement should have an order of magnitude which is not fortuitous, which does not fluctuate between, say, one year this time and ten years next time, but which shows some regularity of habit between, let us say, three and five years.

Let us recur to what happens at the crisis. So long as the boom was continuing, much of the new investment showed a not unsatisfactory current yield. The disillusion comes because doubts suddenly arise concerning the reliability of the prospective yield, perhaps because the current yield shows signs of falling off, as the stock of newly produced durable goods steadily increases. If current costs of production are thought to be higher than they will be later on, that will be a further reason for a fall in the marginal efficiency of capital. Once doubt begins it spreads rapidly. Thus at the

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outset of a slump there is probably much capital of which the marginal efficiency has become negligible or even negative. But the interval of time, which will have to elapse before the shortage of capital through use, decay and obsolescence causes a sufficiently obvious scarcity to increase the marginal efficiency, may be a somewhat stable function of the average durability of capital in a given epoch. If the characteristics of the epoch shift, the standard time-interval will change. If, for example, we pass from a period of increasing population into one of declining population, the characteristic phase of the cycle will be lengthened. But we have in the above a substantial reason why the duration of the slump should have a definite relationship to the length of life of durable assets and to the normal rate of growth in a given epoch.

The second stable time-factor is due to the carrying-costs of surplus stocks which force their absorption within a certain period, neither very short nor very long. The sudden cessation of new investment after the crisis will probably lead to an accumulation of surplus stocks of unfinished goods. The carrying-costs of these stocks will seldom be less than 10% per annum. Thus the fall in their price needs to be sufficient to bring about a restriction which provides for their absorption within a period of, say, three to five years at the outside. Now the process of absorbing the stocks represents negative investment, which is a further deterrent to employment; and, when it is over, a manifest relief will be experienced.

Moreover, the reduction in working capital, which is necessarily attendant on the decline in output on the downward phase, represents a further element of disinvestment, which may be large; and, once the recession has begun, this exerts a strong cumulative influence in the downward direction. In the earliest phase of a typical slump there will probably be an investment in increasing stocks which helps to offset disinvestment in working capital; in the next phase there may be a short period of disinvestment both in stocks and in working capital; after the lowest point has been passed there is likely to be a further disinvestment in stocks which partially offsets reinvestment in working capital; and, finally, after the recovery is well on its way, both factors will be simultaneously favourable to investment. It is against this background that the additional and superimposed effects of fluctuations of investment in durable goods must be examined. When a decline in this type of investment has set a cyclical fluctuation in motion, there will be little encouragement to recovery in such investment until the cycle has partly run its course.¹

¹ Some part of the discussion in my *Treatise on Money*, Book IV, bears upon the above.

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Unfortunately a serious fall in the marginal efficiency of capital also tends to affect adversely the propensity to consume. For it involves a severe decline in the market value of Stock Exchange equities. Now, on the class who take an active interest in their Stock Exchange investments, especially if they are employing borrowed funds, this naturally exerts a very depressing influence. These people are, perhaps, even more influenced in their readiness to spend by rises and falls in the value of their investments than by the state of their income. With a "stock-minded" public, as in the United States to-day, a rising stock-market may be an almost essential condition of a satisfactory propensity to consume; and this circumstance, generally overlooked until lately, obviously serves to aggravate still further the depressing effect of a decline in the marginal efficiency of capital.¹

Brief Summary of Chapters VII and VIII.

Let us try to summarise the contents of the last two chapters very briefly: we have seen that the purpose of equations of the value of money is to demonstrate the factors which govern the intensity of economic activity; that the quantity theory provides a first approximation, but that their effects rather than the real causes themselves are made manifest; that no very instructive use can be made of the income-velocity approach; that we can comprehend the trade cycle in the terms of the approach given in *The Treatise*, wherein we define income in a special sense such that saving and investment can diverge; but that this treatment is open to the objection that the equilibrium given by the equality of I, I' and S is not the unique one wherein there is no involuntary unemployment, but will usually be the "half-dead" equilibrium of common experience; that we choose three factors as the determinants of the economic system, and regard the rest as given, since their movements are slow and relatively small; and that the former—the propensity to consume, the schedule of the marginal efficiency of capital, and the schedule of interest rates—may be regarded as independent variables; yet that these are only proximate causes which are influenced in particular by the schedule of liquidity-preference and by the quantity of money; that it is the collapse of the schedule of the marginal efficiency of capital which brings booms to an end; and, finally, that certain factors operate to delay recovery from depression for

¹ *The General Theory*, pages 315-319.

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a fairly clearly defined length of time, the existence of stocks of capital-goods, in the form of productive resources and consumption-goods at all stages of manufacture and distribution, being the chief objective factor of this sort.

BOOKS

The last two chapters are concerned solely with the three works of Mr. Keynes cited at the end of the first section of Chapter VII, namely:

1. *A Tract on Monetary Reform*, 1923.
2. *A Treatise on Money*, 1930.
3. *The General Theory of Employment, Interest and Money*, 1936.

The first of these is quite straightforward; the second is difficult and the third very difficult reading. The last two are more suitable for those possessing a considerable knowledge of economics than for the uninitiated, and an attempt to study *The General Theory* would benefit greatly from prior acquaintance with *The Treatise*.

These are the books which repay the effort to understand; and, although ideas have progressed since both of the earlier ones were compiled, this does not mean, as it means with lesser works, that their content is misleading or valueless; the modifications, reservations and comments, necessary in the clear light of later thought, permit the contribution of these volumes to remain great.

CHAPTER IX

MONETARY STANDARDS AND THE FOREIGN EXCHANGES

§ I

The gold standard: general statement; the objects of the gold standard. Its four forms. The control of the exchange rates by gold movements. Exchange Equalisation Accounts.

The gold standard is an arrangement whereby the chief piece of money of a currency is exchangeable with a fixed quantity of gold of a specified quality. We say the chief piece of money because the law which enacts the adoption of the gold standard by any country speaks of "the pound sterling", "the franc", "the dollar", or whatever it may be, as equal, in some sense or other, to so many grains of gold; there is no occasion to specify the amount of gold for each constituent of a currency, for the exchange ratios between the different units of the same currency are fixed already, so that, if the value of one is fixed in terms of gold, so, therefore, are all the rest.

Pure gold is a soft thing, easily broken or flaked, wherefore a certain amount of alloy is mixed with it, so producing one of the most resistant metals in existence. Thus, instead of specifying that, let us say, the lira shall be equal to so many grains of pure gold, the more usual form is to declare that the price of gold shall be (say) 700 lire per "standard" ounce, where a standard ounce means one made up of eleven parts of pure gold to one part of alloy; there may be some slight difference in fineness between different countries' standard golds, but the percentage of alloy is small, and its value negligible in all cases.

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It used to be the custom, an almost universal one, for the state to impose upon the central bank the duty of exchanging currency for gold and gold for currency, at the exchange ratio specified in its gold standard law, upon the request of any member of the public.

Sometimes there is a slight margin between the central bank's buying and selling prices for gold. For example, before the War, the Bank of England bought standard gold at the price of £3 17s. 9d. per ounce (troy) and sold it at £3 17s. 10½d.; in those days, gold coins circulated and the "turn" of 1½d. per ounce was supposed to represent the interest obtainable by changing gold into money at once instead of taking it to the Mint, which had to coin it for the owner without charge, but took some time to do it.

In the past, if the margin between the central bank's buying and selling prices had been considerable, of the order, say, of 5% or 10%, it would certainly have been felt that the country in question was not *properly* on the gold standard, and no doubt the priests of financial orthodoxy in foreign countries would have regarded the rulers of that land as being, either through ignorance or vice, grossly deficient in their practice of the faith. Nowadays we should not be so sure.

The objects of the gold standard are to maintain the value of the currency in terms of foreign currencies and to maintain it in terms of purchasing power within the country.

The manner in which the first object is fulfilled is as follows: suppose that France and England are both upon the gold standard, with the price of gold per standard ounce, $\frac{11}{12}$ fine, fixed at £7 and 700 francs; in that case the exchange rate between pounds and francs must be 100 francs to £1; it is to maintain this equivalence between the currencies that the gold standard exists. Suppose, further, that a very large number of English people decide to spend their summer holidays in France: a large quantity of francs will be required, so English people go to the foreign exchange dealers and get francs for pounds. Now what happens when the foreign exchange dealers begin to run out of francs? What happens to any good when stocks of it are falling and the demand continues unabated? The price must go up, and price, in the case of currencies, means the terms of exchange with foreign currencies. Thus, if the great demand for francs continues,

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the rate quoted may go to 95 francs to £1; at this moment, there comes into the market a type of dealer whose proper name is an arbitrageur: he takes a large sum of sterling to the Bank of England and draws gold in exchange; this he ships over to France and his Paris agent takes the gold to the Banque de France and exchanges it for francs; now we know that the rate at which francs can be obtained for sterling by this method is 100 francs to £1, but, of course, the transfer of gold in this way costs money: besides any difference between the buying and selling prices of central banks (which is usually of small importance), there are shipping, rail and handling charges, insurance and the loss of interest which might have been gained on the original money which the arbitrageur took to the Bank of England. But all these costs used to amount to only about $\frac{1}{2}\%$ of the value of the gold.

Having obtained francs in Paris, the arbitrageur would have them despatched to England and there sell them at the rate of 95 to £1, so making about $4\frac{1}{2}\%$ profit on the transaction; actually, it is fairly easy to see that this is an absurd example; the profit is far too high; long before the rate of exchange touched 95, arbitrageurs would have begun to move gold and thereby make francs available in London; in fact we can see that, if the cost of gold movements is only about $\frac{1}{2}\%$, then the franc cannot deviate appreciably more than $\frac{1}{2}\%$ either above or below the "par of exchange" (the name given to the rate which equilibrates the gold contents of the two currencies: 100 francs to £1 in our example). In our example, then, the limits would be $99\frac{1}{2}$ francs and $100\frac{1}{2}$ francs to £1: if the rate passed these limits, gold movements would bring it back quickly within them. And, in practice, the knowledge that gold movements could bring the exchanges back to par has usually sufficed to keep the rates within gold points, actual gold movements being unnecessary. The two limiting figures are called the upper and lower, or import and export, gold points.

In the second place, the *internal* value of the currency is preserved by allowing the public freely to obtain gold in exchange for currency (of equal value) from the central bank. Liberty to do this ensures that the value of the notes shall always be the same as the amount of gold which they are supposed to represent—so long as the gold standard remains in force. This argument assumes, of course, that the purchasing

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power of gold remains constant; at this stage we will say merely that, although the bases for making this assumption are not really very sound, yet a belief in the stability of gold is widespread, even to-day, and it is this belief which is vital to the smooth working of the system; the actuality does not matter very greatly so long as men in general preserve their simple faith in gold.

Of the four forms which the gold standard may take, the first three are well known, but the last is a possibility for the future rather than a matter of experience. The following details distinguish the four types.

(i) The gold circulation standard: with this form of the standard, gold coins are actually in circulation. It is the essence of the matter that the chief gold coin should be full-bodied; it was felt that such an arrangement gave solid and tangible security in the most reassuring manner possible. There was, as well, the added convenience that the traveller could proceed abroad, bearing his own currency with him, in the confident expectation that any person or establishment of consequence would accept it in payment without question. This was the monetary system which the world regarded as right and proper during the latter part of the last century and the early years of the present one; when the War broke out, it had been adopted by all nations of importance except China; since the War, this form of the standard has not been resumed.

Sovereigns could be exported, as well as gold bars, and it was quite lawful to melt them down; conversely, gold ornaments could be taken to the Bank and exchanged for money of the value indicated by their weight and fineness.

The gold circulation standard is very ancient: silver, indeed, has served as standard throughout a greater period of history, but, even so, the passing of gold from hand to hand as money is an immemorial custom. We may describe the gold circulation standard, therefore, as a primitive monetary criterion: it is the traditional system. Later forms of the gold standard have inherited the halo of sanctity attaching to this long established method of payment.

(ii) The gold bullion standard: this is the type of standard typical of the stabilised interlude after the War. It is different from the first type in that gold coins do not exist; furthermore,

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the single monetary unit (the £1 note for example) cannot by itself be turned into gold by presenting it over the counter of the central bank. Bar gold can be obtained, however, by those willing to surrender the large sum in notes which is equivalent in value to one bar. In the case of Great Britain, this sum was £1,557 10s. 0d. The idea behind this change was that the gold would be more useful when concentrated in the hands of the central bank. It is true that, should the feeling spread that the convertibility of the currency into gold was in danger, the public was no longer able to safeguard small savings by changing them into gold coins, but, by the time that the return to the gold standard was made, the public of most countries had become quite accustomed to the use of notes instead of gold coin, and seemed, indeed, to prefer the former.

The ability to obtain gold, and the liberty to melt or export it: these were the things then considered important: countries strove, after the War, to re-establish these arrangements, and succeeded—for a time.

(iii) The gold exchange standard: this form of the standard is usually a half-way stage between inconvertibility and one or other of the foregoing types. As the name suggests, the currency of a country possessing this sort of standard is convertible not directly into gold, but into the currency of some other country which does possess a gold standard. Thus, if France maintained, let us say, type (ii) gold standard, and the pound sterling were, at the time, inconvertible into anything else at the central bank, the government might enact that the Bank of England should always give French francs to those who required them in exchange for sterling at the rate (say) of 100 francs to £1; in this way, it will be possible to manage with less gold than would be required if every country had its separate stock, but usually the adoption of the gold exchange standard is carried out in the hope that the "full" gold standard (generally meaning the gold bullion standard) will become possible later. Yet if the trade of a small country were carried on largely with a great neighbour, it might well be more important for the former to have its currency fixed in terms of the currency of the great neighbour than to have it fixed in terms of gold; Denmark and England constitute an example of such a case.

(iv) The gold reserve standard: there is an arrangement in

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existence at this moment¹ between Belgium, France, Great Britain, Holland, Switzerland, and the U.S.A. whereby gold movements can take place between one country and another, although the gold standard in any of the foregoing senses is no longer in existence. It would not be true to say that the central banks are the only present dealers in gold; there is a large volume of gold, which is not in the possession of the monetary authorities, dealt in on the outside gold market; and it is not officially the central banks themselves that are the dealers in the authoritarian gold stocks; the institutions which handle the present movements are sub-departments of the treasuries of the various countries which created them for this purpose; since these sub-departments (which are known variously as Exchange Equalisation Accounts, Equalisation Funds, Exchange Funds, "The Control", and the like) will probably be incorporated sooner or later in the respective central banks, which already give advice concerning the operations of the Funds if they do not actually carry them out, it will not be amiss to speak as if the gold movements took place between the central banks without government control.

Each of these Funds is equipped with a large amount of its own currency (and some at least with much gold also), so that, if a particular currency is being bought to an extraordinary degree in the foreign exchange markets,² the Fund in question can make available a sufficient supply of its own country's money in exchange for foreign money; in this way the exchange rates can be kept stable. But a Fund does not want to accumulate great holdings of foreign currencies, wherefore the agreement was made that the Funds should be permitted to sell their gold to each other.

The case wherein such action would be necessary appears to be of the following sort: suppose the British Fund found its holding of dollars growing too great: it would then represent to the American Control that it could not go on holding so many dollars; since that is an accepted principle among the managers of the Accounts, the American Fund would thereupon agree to accept the dollars and give London the equivalent in gold.

We must not suppose that the exchange rates can be kept stable within ranges of about 1%, as was possible under the

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earlier types of gold standard; but at least wild fluctuations of 5%, 10%, or 20%, within the space of a few days can be avoided.

It is the peculiar merit of this sort of gold standard that it is not necessary to fix the price of gold in terms of a currency rigidly. It sounds odd to describe such a characteristic as a merit after stating above that the object of the gold standard was to keep the internal and external values of a nation's money stable; but it may well be a matter of great doubt what gold value ought to be assigned to a currency, and evil consequences will assuredly follow if a wrong choice is made.

As an instance of this sort of thing, let us consider the case wherein the French franc is being dealt in on the foreign exchange markets at 100 francs to £1 and 20 francs to \$1, giving a "cross-rate" of \$5 to £1. After some time, let us suppose, it is noticed that all the Funds are accumulating francs; by providing other currencies for the francs which have been on offer, they have been supporting the franc. They therefore make representations to the French Fund, which releases gold in exchange for their francs; but the French Fund cannot let itself be denuded of gold in this way, so the Controls agree that they will no longer support the franc; it is clear that the rates of 100 francs to £1 and 20 francs to \$1 have been too high; such figures have "overvalued" the franc. So what the Controls do is to withdraw from the market in francs; this means that, when further sales of francs are made, in New York, for instance, the American Fund no longer comes into the market and buys them up; or perhaps it does operate a little, sometimes buying and sometimes selling francs, so as to cause the franc rates to decline gently to (say) 22 francs to \$1 without wide fluctuations from day to day. When (the cross-rate of \$5 = £1 being unchanged) the franc reaches 22 to \$1 and 110 to £1, or some other rates agreed upon by the Funds, they come in again and buy all francs offered at those prices, which thereby become fixed.

The advantage of this method lies in the fact that it provides the greatest amount of exchange stability possible without the threat of a fearsome crisis if some country has to let its currency depreciate in terms of others'. The values of franc, dollar, pound, etc., need not be fixed in terms of gold; the price of gold (which is the inverse of the same exchange

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ratio) can be fixed anew for every deal involving gold among the Funds; by this method, panics deriving from the fear that the gold standard will have to be abandoned need never arise again. At the same time, a considerable degree of exchange stability can be procured.

Fear that the gold standard is about to be revoked, be it noted, is an example of a very powerful influence upon the schedule of liquidity-preference; the spread of such a fear would make men want to hold their assets in more liquid form, so widening the gap between long- and short-term interest rates, and tending to depression. To avoid this, if we are not giving up too much to do it, is very well worth while.

Exchange Equalisation Accounts are discussed further in Chapter XV.

In speaking, above, of "the gap between long- and short-term interest rates", we seemed to be suggesting, perhaps, that the former were invariably the higher; but short-term rates have not always, of course, stood below long-term rates. When the reverse has held, usually in quiet times, liquidity-preference may be seen operating in an inverse sense: investors forgo some of the interest obtainable on short-term for the sake of the freedom from trouble which sound long-term securities offer; after all, few investors have time available and connections established for dealing in the short market; it is not surprising that tranquil periods, when it is safe to leave capital moneys in bonds, often see relatively high short rates. When doubt and fear bring anxiety to investors, however, safety seems to lie in the shorter dates. Perhaps only a fringe of investors is so sensitive to uncertainty as to react in this way, but money transferred from one market to another affects the two sets of rates in different directions, so that small amounts may be reasonably expected to produce appreciable effects.

§II

Silver and bimetallism. Bimetallism theoretically always possible. Fluctuations in demand for and supply of gold and silver. Gresham's Law applied. The irrelevance of the bimetallist controversy. Symmetallism.

In recent discussions, much attention has been given to

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gold as a monetary standard, and very little to silver; only in the United States, where silver producers can exert a political influence disproportionate to their importance,¹ is the desire "to do something for silver" a live issue; even China, which held to a silver standard (of necessity) long after other countries had abandoned it, revoked it in 1934—as a result of United States purchases of silver!¹

Yet it has been silver rather than gold which has been the traditional standard throughout the greater part of monetary history. The silver standard of old was similar in detail to the first type of gold standard described in the previous section: it was a silver circulation standard.

Whilst there would be no considerable support to-day for the extensive adoption of a monometallic silver standard, there are still advocates of bimetallism—the simultaneous maintenance of gold and silver as monetary standards. Bimetallism was, in fact, the system still in force over an important commercial area² in 1873; it was abandoned then in a manner described in the next section: Britain happened, largely by chance, to possess a gold standard; the United States had no standard, but was likely to revert to gold as soon as possible; Germany, on the threshold of commercial greatness, influenced by the advocates of gold monometallism at an international monetary conference held in 1867, therefore made the decision, while reorganising her monetary mechanism, to copy England's system. Germany's action helped to make the position of the bimetallist countries untenable, and adoption of the gold standard resulted in all leading countries within a few years.³

The Ancient Greeks used both gold and silver in their

¹ United States purchases of silver were conducted by the government, and silver-producing interests in the United States benefited by the enhanced price for their product—a fact which cynical Republicans describe frankly as Democratic vote-catching. Sometimes the wholly fallacious argument used to be heard that a rise in the price of silver would benefit China by raising the purchasing power of her currency: the purchasing power of her currency did go up, but not so the value of her exports which continued to fetch world prices: thus prices of exports and prices in general in terms of Chinese currency fell, and this deflationary process became so severe that China had to abandon the silver standard. It might be argued, perhaps, that this was of advantage to her, but that is a different argument: it is not what the advocates of silver purchases for helping the Chinese market had in mind.

² Notably the Latin Monetary Union, comprising France, Belgium, Switzerland, Italy and Greece.

³ See Section 3 of this chapter.

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monetary system, but, whilst the unit of account was specified in terms of silver, it was not so specified in terms of gold; the standard was thus a monometallic silver one, with gold playing a subsidiary rôle for large transactions.

But the great convenience of having the ratio between gold and silver¹ fixed tempted monetary authorities in later centuries to take that step—and great were the resulting confusion and difficulty.

Yet if the right ratio is chosen, it is quite feasible to have both metals as co-equal standards: bimetallism is theoretically always possible. For the values of the precious metals clearly depend, like the values of other commodities, upon their supply and demand. If both metals are equally serviceable as money, either being accepted by the Mint for coinage, for instance, there is no great likelihood of one being preferred to the other as a means of payment; a gradual increase in the scale of payments may increase the use of gold in circulation, but the growth of more highly developed means of payment is likely to effect an economy in the circulating use of gold more than sufficient to offset such a tendency. If the metals are used only as central bank reserves, as gold is now used in the monetary sense, then there is no reason why silver also should not be used by monetary authorities in this way.

If there is no reason to suppose that the monetary demands for silver and gold would shift in relation to each other to an extent calculated to disturb an established ratio, is there any reason to suppose that non-monetary demands would cause trouble? It is no doubt true that a community wherein the general standard of life was rising would be disposed to keep more wealth in the form of ornaments, and that gold is more efficacious than silver for purposes of display; but it hardly follows that the generations of the future will exhibit a gluttonous hunger for gold in preference to silver, if we are ready to make some likely forecasts about the future: namely, that the

¹ "The ratio between gold and silver" means the terms of exchange between the two metals: thus, if the ratio between standard silver ($\frac{1}{22.5}$ fine) and standard gold ($\frac{1}{12}$ fine) be fixed at 20 to 1, and the price of gold established at 130/- per standard ounce, the price of silver would have to be 6/6 per standard ounce. At the moment (January 1937), the market price is just over 1/8!. A ratio of 40:1 would give 3/3 for silver; 2/- per standard ounce would be equivalent to a ratio of 65:1; 2/6 per standard ounce to 52:1. Any other equivalents, which may be more interesting if another value for gold is chosen, can be calculated in the simplest manner.

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monetary systems of the world will not be so precarious that people indulge themselves in luxuries with one eye focussed on the possibility of converting their trinkets into money in a period of monetary chaos; that education and philosophical progress will have dissuaded people from merely gross and vulgar display; and that the defect of tarnishing in the case of silver will have been overcome satisfactorily and cheaply (by washing in rhodium, perhaps).

If, then, we may set aside the fear of the established ratio being disturbed from the side of demand, what prospect remains that relative changes in supply will disturb it? Since the wastage of neither metal is great compared with the supply, it is clear that the smallness of the annual supply, compared with the existing stocks, is a major condition implying the continuance of an established ratio. In times gone by, of course, the stocks of the precious metals were smaller, absolutely, and relatively to their annual increments; that is to say that bimetallism, once established, should become easier and easier to maintain as time goes on.

Nothing very definite can be said about the future supplies of the metals, though it is obvious that a monetary value for silver, fixed greatly above the present market value, would stimulate the production of the cheaper metal.

The great demand for gold at present emanates from the monetary authorities, some of whom have fixed its price in terms of their respective moneys; because the stock which they hold is so great, and because their buying power is unlimited, there is no reason why the value should ever be changed again (so long as there is no great force at work altering the value of one currency in terms of another¹); the amount of money can be varied irrespectively of the amount of gold in their possession, and their preponderance as dealers in gold fixes its value. The same could be true of silver if the monetary authorities chose to make it so.

Yet the history of bimetallism is by no means the simple and successful affair which the foregoing sketch of present hypothetical possibilities might lead us to suppose. It is a

¹ Here, as elsewhere, when we speak of one currency altering in value in terms of another, it is not the total volumes of the two currencies which are referred to, but the exchange rates of different currency units: the pound in terms of marks, the dollar in terms of francs and so forth.

record of commercial dislocation and national rivalry, engendering, for example, the egocentric patriotism of the Mercantile System. Bimetallism for one country is always likely to break down, and bimetallism with different countries trying to maintain different ratios between gold and silver is certain to do so.

It seems astounding that different countries did try to maintain different ratios, but that is in fact the story of the double standard. Obviously Gresham's Law must operate in such circumstances. For instance, the United States, newly established in political independence, set up a ratio, in 1792, of 15 to 1; soon afterwards, the ratio in France was fixed at $15\frac{1}{2}$ to 1; naturally, the metals went to the countries which overvalued them, silver to the United States, gold to France; in 1834, however, the former country changed the ratio to 16 to 1; thereupon the trend of the metals was reversed, resulting in the virtual adoption of the gold standard by the United States, which suffered proportionally larger changes since it was then a country of smaller commercial wealth and importance. France, better able to stand the effect of the change, continued to adhere to the double standard. At the conclusion of the Franco-Prussian War, however, France, whose financial position was aggravated by a formidable indemnity of 5,000,000,000 francs, exacted under the terms of the Treaty of Frankfort,¹ began to experience a great influx of silver, coupled with a drain of gold; in a world in which the leading countries had gold standard currencies, the threat of drifting on to a monometallic silver basis (*de facto*) was not to be viewed with equanimity, wherefore France, actuated by political as well as by economic motives, decided to adopt gold.²

¹ Prof. H. A. L. Fisher, dealing in large terms with great issues, writes (*A History of Europe*, 1936, page 994) that "The indemnity was a bagatelle soon disposed of . . ."; this remark would be misleading if divorced from its context and its author's broad perspective: the indemnity was considered at the time to be of crushing dimensions, and its prompt discharge, which occasioned considerable surprise, not to say rage, in Germany, was made at the cost of considerable sacrifice. Remarks relevant to this point may be found in J. Harvey Robinson: *Mediaeval and Modern Times*, 1926, page 621; D. Lloyd George: *Reparations and War-Debts*, 1932, page 78; and J. M. Keynes: *The Economic Consequences of the Peace*, 1920, pages 186-187.

² Further discussion of the events is given in the following section of this chapter.

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Such was the death of bimetallism. Since then, its ghost has haunted the United States, emitting effective groans, of a agitating nature, in times of depression. But some of those who cry that bimetallism is "impossible" are concerned, perhaps, only with the political arena, where the beliefs which can be foisted upon a gullible and ignorant public seem more important to the cynical than does the truth; when economic questions become political playthings, the truth always falls to a discount.

A case showing the virtues of bimetallism, as opposed to the monometallic gold standard, can be made, indeed, to appear quite strong: the cardinal point is that bimetallism would obviate periodic shortages of money, alleged to be entailed by the gold standard. But such argument (and, equally, the contrary case for gold against bimetallism) makes the assumption of a relation, more or less rigidly determined by forces unstated, between the volume of bullion on the one hand, and, on the other, the volume of money, and hence of prices, employment and output. Under the present form of the gold (reserve) standard, at least, there is no reason why the volume of gold which happens to be held by central banks should determine the volume of money. Whilst, equally, the volume of money could be decided irrespective of a reserve of two metals, there seems, now at least, to be no occasion to suffer the disturbing effects entailed in a return to bimetallism, if the benefits claimed for that change can be had without it.

Clearly, a general remonetisation of silver, whose price would have to be fixed considerably above current market rates if the authorities were to acquire a sufficient quantity, would be tantamount to a subsidy to silver producers; this would probably transform the United States into a bullion exporter, a change calculated to disturb present dollar rates on the foreign exchanges. India, after experiencing a sudden increase in wealth, since her silver stocks are great, might become a large exporter of silver, thereby suffering deflationary pressure. These and other probable consequences would not conduce to orderly progress.

The subsidising of silver production by permitting its use on a large scale in central bank reserves might lower the prices of lead and copper somewhat, since these ores are found together in the natural state; in this respect it would

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certainly have an advantage over the present system which virtually affords an unintentional subsidy to gold producers; but this is a point of minor importance. On other grounds, there exist the same arguments for and against a silver subsidy as can be adduced in the case of other subsidies claiming no special virtue: broadly speaking, we may say that there is an argument for subsidies in times of acute depression, but not when employment is full. In any case, it is probable that "more deserving" cases than silver producers and refiners could be found for purposes of subsidy.

In conclusion, we may observe a term invented by the late Prof. Marshall¹ in the days when the bimetallist controversy raged around the point (*inter alia*) of whether one metal could drive out another in a large area wherein bimetallism had been re-established: suggesting that the metals might literally be fused together, and form a standard amalgam, both for coinage and for reserve purposes, so that one metal could by no means displace another, he called such a state of affairs "symmetallism". Whilst this system might possess the advantage which he pointed out, the benefits to be derived from it can be had, like those of bimetallism pure and simple, without the trouble of establishing a symmetallic régime.

§ III

- (i) *The origin of the gold standard: accidental in Great Britain. The Bank Restriction Period and the return to gold.*
- (ii) *The adoption of the gold standard by Europe at the end of the nineteenth century. The Latin Monetary Union.*

(i) Great Britain virtually adopted a gold standard early in the eighteenth century, in a manner which can only be described as accidental. As the seventeenth century closed, England was losing silver and accumulating gold by reason of her undervaluation of the former and overvaluation of the latter metal. Before steps had been taken to remedy this state of affairs, England joined in the War of the Spanish Succession;

¹ Alfred Marshall: *Money, Credit and Commerce* (1923), pages 65-66.

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during the War neither metal was brought to the Mint to be coined; after the Treaty of Utrecht (1713), however, large quantities of gold were brought to be coined. In order to prevent the silver coinage being melted for export, therefore, the value of the guinea was lowered, in 1717, from 21/6 to 21/-, on the advice of Sir Isaac Newton, then Master of the Mint. The price of gold was then £3 17s. 10½d. per standard ounce, a figure which established the standard until 1931, with only two periods of suspension, during the Napoleonic Wars and the Great War.

This step had a decisive effect only in the sense that it failed to abolish, though it did reduce, the premium given on gold in England as compared with other countries: the effects were to attract to the melting-pot full-weight silver coins, but to leave England in possession of a quantity of short-weight silver currency which was not intolerably inadequate for her commercial needs.

For very long, the shilling had been the unit of account of the country, and the shilling had always been a silver coin; the various gold coins had represented a number of shillings which had tended to increase as the value of gold went up relatively to that of silver. Now, however, gold began to fall in terms of silver, and perhaps this is the main reason why the customary unit of account changed from the shilling to the guinea, and the standard from silver to gold. People naturally tend to calculate their wealth in terms of a coin which is depreciating, and to estimate the coins of the other metal at a premium —other things being equal. In fact, during the first half of the eighteenth century, instead of passing the guinea at less than its proclaimed value of 21/, they began to think in terms of guineas, and to estimate the full-weight silver in those terms at a premium, and therefore to melt and export it. That way profit lay; to pass the guinea at a discount would have shown a loss in their accounts.

We demanded above that "other things" should be equal as between the rival coins, guinea and shilling; for if the guinea had been represented, for instance, by coins whose purity was doubtful, such a change-over might not have taken place. As it was, other things were not equal: they were in favour of the guinea; so much so, indeed, that they were strong enough, together with the natural tendency at work, to

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detkrone the ancient shilling from its place in men's minds. Guineas were good coins and the silver ones were old, worn and clipped; the former were constantly being issued by the Mint, and the total stock was plentiful without being excessive; there was little prospect of the supply being depleted on account of melting for export. Furthermore, the scale of commerce had increased so greatly, and values were so much higher than in earlier days, that the guinea had become of suitable size for a large proportion of the nation's transactions.¹ With the guinea as unit, its golden substance naturally came in as standard.

By the time of the Napoleonic Wars, the monetary system of the country had changed greatly: small banks of a precarious nature² covered the country. War spread fear for the convertibility of the notes of these institutions; a rumour of invasion occasioned panic: men rushed to convert notes into currency for hoarding. The Bank of England's stock of gold gradually dwindled—because private bankers cashed its notes to obtain coin for their customers; not because men feared the Bank would fail. At the same time the government was compelled to borrow on a dangerously large scale from the Bank, the amount of bills drawn on it by the army being the subject of particular complaint by the Governors. The double strain upon its bullion reserves, constituting an internal and external drain, was too great: early in 1797 the encashment of its notes was discontinued. This stoppage, which lasted until 1821, is known as the Bank Restriction.

The Restriction must not be looked upon as anything catastrophic: in major wars, governmental needs will always sweep aside the monetary standard. If the government borrows from the central bank, or from the public which discounts its obligations at the central bank, that institution's assets and liabilities are thereby increased; but such new liabilities of a central bank, whether they are notes or deposits, form a net increase in the volume of means of payment. According to the simple quantity theory, therefore, we should expect the value of the monetary unit to decrease. This is what happened in England during the Restriction Period: in particular,

¹ It would be wrong to exaggerate the importance of this factor, however, in view of the persistence, even to this day, of a unit of account so low in value as the French franc.

² See Chapter V, Section 3.

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the value of gold appreciated in terms of the now inconvertible notes of the Bank of England. But these notes were readily accepted in payment, just as inconvertible notes were the main form of currency during the Great War and are so at the present time. Gold coins ceased to circulate.

After the close of the Napoleonic Wars, a period supervened during which (as a whole) the volume of money was reduced; since the suspension, also, the volume of money required to sustain the pre-war price-level had advanced by reason of the increase of population and of industrial development. By 1821, the premium on gold had disappeared, and the Bank had accumulated an adequate reserve of gold again; thereupon, the convertibility of Bank of England notes was resumed.

An Act, passed five years earlier, had arranged for a new coin, the sovereign, to succeed the guinea of the eighteenth century; the former was to be proportionately smaller so as to be equal to 20/-, with the old price of gold restored at £3 17s. 10 $\frac{1}{2}$ d. per standard ounce. So England returned to the gold standard, which she was to maintain until 1914.

(ii) In the last section, we said something of the assumption of the gold standard by the leading nations while discussing bimetallism. In order properly to understand the sequence of events, we must go back to 1849 and 1850, when discoveries of gold were made in California and Australia: the stream of gold which then began to accumulate in central bank reserves was large enough to make the countries absorbing it well disposed towards the project of adopting the gold standard. Just as England adopted the gold standard as gold was increasing in volume and decreasing in value, so did the rest of the world a century and a half later.

Belgium, Switzerland and Italy being possessed, for various reasons, of insufficient stocks of currency, had adopted the French currency units and made French coins legal tender within their frontiers. When the supplies of new gold threatened to displace the full-weight silver currency, these countries had to reduce the fineness of their silver coins. Meanwhile all their silver coins, now reduced to the rank of tokens, had become legal tender in each of the four countries concerned. But trouble arose because the degree of fineness

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of the different countries' coins differed, wherefore an agreement was concluded to make all the silver coins $\frac{885}{1000}$ fine, but to limit their legal tender to sums of 50 francs; the five-franc pieces alone remained $\frac{800}{1000}$ fine, were still to be full legal tender, and could be freely coined. By this agreement, France, Belgium, Switzerland, and Italy formed what is called the Latin Monetary Union.

But if the desire for safeguarding the token coinage was the occasion of bringing the Union into being, it also possessed wider aims, and soon developed more. The Union was practically on the gold standard at the outset, and the monetary conference of 1867 supported gold monometallism strongly. But when Europe emerged from the Seven Weeks' War and the Franco-Prussian War, the situation had changed; silver was abundant, and France and Italy had paper currencies, though these were but little depreciated in terms of gold. So much silver was coined that the Union had to suspend the free coinage of the legal tender five-franc pieces. This was in 1874. But the provision was made that each country should be permitted to issue agreed quantities of the silver five-franc pieces, which were still to be legal tender throughout the Union. This provision had to be rescinded in 1878, because the stocks of five-franc pieces had become excessive. France had been in favour of the arrangement because she had hopes of playing the leading rôle in a bimetallic area (a fact of political significance), and Italy had also favoured the provision. But it was not, properly speaking, a bimetallic system. Silver remained the standard only by reason of the external support afforded by the gold reserves; when the strain became too great, it was thought better to discard silver as a standard, rather than to drift on to a monometallic silver standard as a result of the operation of Gresham's Law. A condition like the one prevailing in the Union from 1874 to 1878, with silver being maintained as a subsidiary standard by virtue of the gold reserves, is usually called a "limping standard".

France abandoned silver in order to keep the Latin Monetary Union in being; the purpose was not solely political: there was real convenience in permitting the circulation of the foreign coins, and, furthermore, there was the question of liquidating the excessive stocks of five-franc pieces. The gold standard, thus adopted, remained in being in these countries,

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as in others who adopted it about this time, until the Great War.

Of other countries, little need be said. Germany was mentioned in the last section. The Scandinavian Union, comprising Sweden, Denmark and Norway, and similar in purpose to the Latin Monetary Union, adopted gold in 1873; the external trade of these countries being largely transacted with England and Germany, it was of great importance to have the same monetary standard as their customers and suppliers.

In 1847 Holland had abandoned bimetallism, but she had chosen silver, and not gold, as her single standard metal. The force of Germany's actions between 1871 and 1873 was too strong, however, and, between the latter date and 1876, Holland changed her standard from silver to gold.

The United States had a paper currency from the time of the Civil War, when notes had been issued in so large quantities that great depreciation in terms of gold took place; this "bulge" was deflated partly by the repudiation of all the notes of the Confederate States, to a small extent by reducing the numbers of the "greenbacks"¹ in circulation by about a quarter in the years immediately following the War, and for the rest by the power of absorption of money shown by a community growing rapidly in wealth and numbers. The gold standard was not restored, however, until 1879.

The case of Austria is a record, from the Napoleonic Wars onwards, of war, tumult and depreciated paper. The old silver standard was, indeed, restored for a period before 1848, but this was a transient reform. At length, by 1879, the currency had so far appreciated in terms of other countries' money, that the restoration of the silver standard would have been easy; but Austria-Hungary decided to adopt gold. A period of monetary management followed, in which it was sought to keep the florin steady, not to make it rise further on the foreign exchanges; till 1882 this policy was successful, and the accumulation of a gold reserve proceeded satisfactorily. Then, however, the florin depreciated (because of stringency and deflation abroad), and it was not until 1892 that the new standard was put into operation, at parities with foreign currencies rather lower than had at one time seemed possible.

Russia's experience was similar to the Austro-Hungarian:

¹ Inconvertible notes issued during the War by the North.

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when the rouble reached its silver import point, it was decided to adopt gold as the standard instead. This was made very much easier for Russia because prices in terms of gold were appreciating after 1896. After an interval of management on gold exchange standard lines, she assumed the gold circulation standard in 1897.

§IV

- (i) *The pre-war gold standard: how far automatic? The use of Bank rate.*
- (ii) *The departure from the gold standard during the War. The Cunliffe Committee. The Genoa Conference and the gold exchange standard. The post-war return to gold. The gold standard revoked, 1931. Some later events.*

(i) In 1844, large changes (about which more will be said in Section 1 of Chapter XIII) were made at the Bank of England. After that date, its notes in excess of a stipulated amount, known as the Fiduciary Issue, were to be backed, pound for pound, by gold; against the Fiduciary Issue, government securities could be held as the equivalent assets.

There was some hope felt at the time that this arrangement would permit the gold standard to work in an automatic manner. The extent to which the system was automatic has been exaggerated by some writers. The theory of automaticity ran thus: if the pound depreciated in the foreign exchange markets, that was because England's balance of trade was becoming unfavourable; she must be importing more than usual, so that Englishmen were requiring more foreign currency than the amount of sterling which foreigners were purchasing to pay for our exports. Such a change, it is perfectly true, would cause the pound to fall on the exchanges. Now England's excessive purchases from abroad must be due to her price-level being higher than other countries': that would, of course, make her a good market to sell in and a bad one to buy from, and would explain quite correctly her greater imports and smaller exports. Since the price-level depended, according to the quantity theory, upon the volume of money, it followed that England had too much money.

This is the argument of a man preoccupied with inter-

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national trade. Now hear Dr. Coot's solution: he says, "England has too much money, then: clearly, she must be made to have less of it, and other countries must have more. And this is just what naturally happens: as soon as the pound passes the gold export point,¹ men can make a profit by taking notes to the Bank of England, getting gold and exporting it. The Bank of England cancels the notes since its corresponding assets have been taken away, and the decrease of notes affects the volume of deposits by ten times the amount. The reverse happens in the country getting the gold we have lost: it creates the equivalent in notes or coin and this increases its deposits in a greater proportion. Thus, the two changes, the decrease in England's money and the increase abroad, bring our price-level into line with other countries'; that will correct the unfavourable balance of trade, and everything will be all right."

"And you see," Dr. Coot will add, "the whole thing is automatic: it must happen like that because, when the pound goes past the gold point, you can make a profit from exporting gold, and the experts of the City of London don't miss the chance of making a profit like that."

But the penetrating Prof. Hoot is able to refute this argument. Musing upon monetary theory, he tries to formulate a statement of the proper functions of a central bank, and, in the course of the researches which this concept evokes, he stumbles upon the fact that the Bank of England moves its Bank rate upwards when serious withdrawals of gold are threatened. The Bank rate is so influential that the other rates of interest and discount are impelled to move in the same direction as it does. And then Prof. Hoot perceives the one and only loophole in Dr. Coot's argument: the changes in the volumes of money would act only very slowly upon the respective price-levels, and, furthermore, the changes in price-levels, when finally brought about, would reflect only after a considerable lag upon the balance of trade, and therefore upon the exchanges. Yet the changes in the foreign exchange rates follow very swiftly upon adjustments of Bank rate.²

¹ See Section 2 of this chapter.

² The working of this mechanism is not all described here; the rest of the matter (the forward exchange market) is dealt with in Section 2 of Chapter X.

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Thus Prof. Hoot bursts forth with the discovery that, although equilibrium in the foreign exchanges might be brought about in the way described by Dr. Coot—he is careful, as a good logician, to say this, for it is perfectly true—this is not, in fact, the immediate manner in which it is restored. Then, by a triumph of deductive analysis, he goes on to show that Dr. Coot is mistaken in his assumptions: that the learned commercial authority has virtually assumed that purchases of foreign exchange are made only for the purposes of international *trade*. He, Hoot, points out that purchases of foreign currency are made for capital as well as for income account (and he permits himself a digression of a hundred pages or so to define the difference between capital and income).

The upshot of the matter is this: when the pound approaches gold export point, the Bank of England puts up Bank rate, and other rates of interest and discount go up in sympathy. Foreigners are then able to buy sterling cheaply, and to earn upon liquid capital funds a higher rate of return in London than could be had before. Perhaps, when their funds are changed into sterling, they buy treasury bills, those borrowings of the government which are repayable in three months; the rate of discount on these will have gone up with the increase in Bank rate, and this is certain to attract foreign investors possessing money which they want to keep liquid.

At the same time, fewer bills of exchange will be sent by foreigners for discount, since discounting is now costing them more in London. And this tends to send up the pound in terms of foreign currencies, for the receipt of a bill from abroad for discount is the importation of a foreign security, which has to be paid for, like any other import, in the currency in which it is drawn. Thus a falling off in the stream of bills coming for discount in London means that London discounters are having to buy less foreign currency than usual, while, for about six weeks,¹ the stream of repayments to London discounters will remain unabated.

These two results of the increase in Bank rate combine to

¹ The customary usage of bills is three months; therefore, if the stream of bills is steady, the average time left to run of the bills discounted in London is one and a half months. When a bill is discounted in London, the discounters have to buy foreign exchange; when the bill is met by the drawer, he has to buy sterling.

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push the pound up away from the gold export point at once. If the disturbance is serious, a certain amount of gold moves out from England before the depreciation of the pound is corrected. And this gold movement does have the effect Dr. Coot describes; this takes place slowly, and when it is completed it permits a lowering of Bank rate to the pre-existing level. (other things being equal). The only comment which remains to be added is that gold movements would be of far larger dimensions if the swift relief mechanism defined by Prof. Hoot did not operate.

(ii) Such was the pre-war gold standard. Then came the cataclysm. In the days immediately preceding the outbreak of war, something very like panic took place among the London bankers: they strove to amass liquid funds, and many members of the stock exchange, whose businesses were run upon funds borrowed from them, found themselves in difficulties. The bankers declined to give out gold, but paid out Bank of England notes, telling their customers to obtain gold from the central institution. The Bank had no office arrangements for handing out small quantities of gold to large numbers of people, and the fact that the gold-seekers were kept waiting created the impression that there was a run on the Bank; at the same time, the reserve was falling rapidly; for fear that this should become exhausted, £1 and 10/- treasury notes were issued and made legal tender.

Britain did not formally revoke the gold standard, but difficulties were placed in the way of those who sought to get gold, and, soon after the outbreak of war, patriotic propaganda enabled the newly issued notes to be substituted, to a gratifying extent, for the gold hitherto in circulation. At the end of 1916, the melting of gold coin was made illegal, and, during 1917, the government hindered the provision of cargo space for those who wanted to export bullion. Later, the government, which had taken over insurance against war risk, declined to insure gold. In essentials, while the fiction of the gold standard remained, the reality was abandoned with the outbreak of war.

Yet the course of the exchanges did not show a simple and progressive depreciation of sterling. London was, and had been for very long, a very large lender to foreign countries.

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This took the form of such long-term transactions as the raising of capital to construct railways in the Argentine, and this sort of lending ceased with the outbreak of war; it also took the form of short-term transactions, typified by the discounting of bills. The desire for liquid funds deprived the discount market, as it had deprived the stock exchange, of sufficient funds, and London tried to liquidate its foreign assets. This, of course, could not be done at a moment's notice, for the market was trying to obtain repayment in sterling at a time when no firm wanted foreign currency; they wanted sterling, thus there was no one to sell sterling to the foreigners wherewith to repay their obligations in London. Sterling went to a remarkable premium, and finally the foreign exchange market froze: dealing was discontinued.

After the first shock, something like normality gradually reappeared, and the whole London money market found itself replete with liquid funds. This enabled the government to issue great quantities of treasury bills, and as well it borrowed on Ways and Means' Advances, that is, direct lending by the Bank of England. When the government borrows on Ways and Means Advances, the Bank adds equivalent sums of assets and liabilities to its resources: the Advances are the assets, and the liabilities consist of credit placed to the government account. Such credit is, of course, new money, and, as the government spent it upon its military requirements, so it percolated into the currency reserve of the joint-stock banks. Upon the banks receiving an increase in their "cash" in this way, they could lend some ten times the amount received. But borrowing by private industry was urgently discouraged to prevent competition with borrowing by the government. In effect, the government borrowed whatever could be lent.

The great increase in the volume of money had its effect upon the value of the pound in terms of foreign currencies, but the depreciation which it occasioned was concealed or counteracted by sundry devices, and by fortuitous events.¹ Nevertheless, after the early increase in value, the pound depreciated on the foreign exchanges, whilst prices rose to more than double the pre-war level, so betraying the increase in means of payment. Chance and artifice combined to minimise the

¹ These are matters of too minute detail for discussion in an introductory book like the present one.

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apparent depreciation in terms of foreign currencies—the fall in the external value of the pound; prices indicated the true position more clearly, for the fall in the internal value of the pound was by much the greater. It was inflation.

It is a remarkable thing that a committee was appointed during the War, whose terms of reference virtually required it to recommend the steps which would be necessary to re-establish normal monetary conditions appropriate to the time when the War should be over. Such a matter one might have expected to be left in suspense until after the cessation of hostilities. But it is really amazing that this committee (under the chairmanship of Lord Cunliffe, a former Governor of the Bank) should have been set up so early as January 1918—long before the vision of ultimate victory appeared in August, and indeed before the spectre of defeat had come at the end of March to haunt the nightmares of the Allied leaders.

Surprising though it is, this committee was at work during the extreme moments of the struggle, and it issued an interim report in August 1918. Naturally, its framers could not foresee the future, and their recommendations reflect the monetary theory of pre-war times.

The Bank of England had devoted as much of its new-found resources as was necessary to the creation of notes in order to form an adequate cash basis for the enormously enhanced volume of credit money; properly speaking, these notes were exchanged for the Treasury's currency notes, and it was the latter, not the former, which formed the cash basis. The limit to the Fiduciary Issue had gone by the board.

The August Report of the Cunliffe Committee did two chief things: it alleged the adequacy of Bank rate as an instrument of control (of raising Bank rate to curb inflation), and it strongly recommended that a limit be fixed to the Fiduciary Issue: the maximum note issue permissible should be no greater, it said, than the high limit of the notes actually in circulation during the preceding year. This was a policy suitable for a period of readjustment occupying several years, and it was framed without the foresight to imagine the extraordinary and supplementary devices of control which post-war complexities would necessitate. The Report recognised the truth, which had been suppressed hitherto, namely, that the gold standard was virtually non-existent.

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Yet with the coming of peace, the exchange rates were let loose, the wartime devices for keeping the pound above the appropriate level¹ being discontinued: a low Bank rate and plentiful money continued. The gold standard was formally abandoned. In 1920, as a result of running counter to the recommendations of the Cunliffe Committee, inflation proceeded unabated. In 1921, however, the authorities definitely "went deflationary". Bank rate was put up to the unusually high figure of 7%, and a large surplus was budgeted for, with a view to collecting and destroying some of the excessive number of currency notes. Furthermore, restriction of lending was practised. The bubble burst: prices came toppling down, and the volume of output, which had been near to maximum capacity, declined steeply; large scale unemployment appeared.

These effects had never been intended; but so great was the fear of uncontrolled inflation that the conditions producing the evils were permitted to continue. The situation in other countries certainly constituted a warning against the excessive creation of money. A meeting of experts examined the deteriorating position at a conference held in Brussels in 1920. In 1922, a monetary commission set up by the abortive Genoa Conference, examined the financial position of the nations. Their chief recommendation was the establishment of the gold exchange standard to precede a return to a fuller form of the gold standard on the part of the countries whose money consisted of depreciated paper.

This recommendation was in fact put into practice in a number of cases within the next five years. The restoration of the gold (bullion) standard was achieved by the nations, but only by means of severe restriction of credit, which reduced their economic activity (notably in the case of Great Britain) to levels of bitter depression.

In Great Britain, depression had brought the pound almost up to the pre-war parity with the dollar (1923); the following year, a relapse of the exchanges occurred on account of greater economic prosperity. In 1925, however, better conditions abroad brought the pound back to parity; the Bank of England had accumulated a sufficiency of gold, and so Great Britain re-established the gold standard, at the old price for standard

¹ Notably the \$-£ rate was freed from control.

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gold of £3 17s. 10½d. per ounce, and with the dollar, which had not been divorced from gold, back at the old parity of \$4.86⅔ to £1. It did not appear at the time, though it was realised later, that the pound had reached these levels only by reason of purchases of sterling on the part of speculators who correctly anticipated our return to gold at the old parity.

The return to gold by Great Britain was a mistake. Some there were (notably Mr. J. M. Keynes) who said so at the time. The pound, whose value was truly shown by what it would purchase within Great Britain, was not really worth what the exchange quotations showed it to be equal to in terms of foreign currencies. Thus the period from 1925 was one of struggle on the part of Great Britain to maintain the exchange parities with other currencies which her return to the gold standard had established.

Meanwhile, other countries returned to gold in conditions considerably more advantageous than those Great Britain had chosen. Thus she was left struggling to maintain her gold reserve at the cost of continuing depression, with unemployment at over a million. In 1928 and 1929, a speculative boom in the United States provided even Great Britain with some relief, but by the end of the latter year, the boom had cracked and the greatest depression of all time was well on the way.

Austria and Germany got into difficulties first, for reasons connected with the course of international lending.

South American countries were soon in similar straits. By this time England's position was widely distrusted; the first great moment of the tragedy was not far off: on 19 September 1931, Great Britain revoked the gold standard; the mighty pound was severed from its traditional golden anchor, and this in a time of peace. Many other countries followed suit without delay; all did so in the end. The pound, and the currencies of those countries dependent on Great Britain for an external market, remained unattached to gold; they became "managed" currencies. The United States sought relief from depression by devaluating her currency (April 1933), that is, by reducing the quantity of gold equivalent to the dollar. France, Switzerland, Holland, and, for a time, Poland, Italy and Belgium, remained to form the "Gold Bloc". Recovery came slowly, but not in these countries which clung to the gold standard. Finally, in 1936, the Gold Bloc was forced

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to devalue, and the tentative arrangements, described as the gold reserve standard in the first section of this chapter, were made.

The phrase, "managed" currencies, used above, calls for explanation: managed with what ends in view? The ends took the forms of social objectives, recovery and stability; these have never been coupled with a distinctive and recognisable monetary policy, although it might be said, in the case of Great Britain, that low interest rates have been maintained consistently. In using the expression, a managed currency, it must not be forgotten that the gold standard, even in its purest form, the pre-war gold circulation standard, was always a managed system; the post-war gold bullion standard was more clearly, quite obviously, a managed system. The difference between a gold standard currency and a free currency is not the absence or presence of management in the system; management, in the sense of regulation, there is always; the difference lies in the object or purpose of the management: under the gold standard, it is the external value of the currency which is of prime concern to the monetary authorities; in the great depression, it was the internal value whose disastrous upward movement forced the authorities to make it their chief concern.

BOOKS

1. D. H. Robertson: *Money*, 1935, Chapter IV, Section 1, refers to conditions prior to September 1931. A very short description, given by Erich Roll: *About Money*, 1934, pages 70 and 71, was written before the authoritarian gold standard was invented. Edward Cannan: *Money*, 1935, Part I, Chapter II, Section 1, describes the pre-war gold standard. Norman Crump: *A First Textbook of Economics*, 1934, Chapter XIII, Sections a, b and d, gives information about all but the latest developments.
2. For a general exposition of the matter of this section, see F. W. Taussig: *Principles of Economics*, 1927, Volume I, Chapters XX and XXI.

For the theoretical case of bimetallism, see Irving Fisher: *The Purchasing Power of Money*, 1911, Chapter VII.

For fluctuations in the ratio of gold to silver and their effects, see A. E. Feavearyear: *The Pound Sterling*, 1931, *passim*.

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and particularly J. L. Laughlin: *Money, Credit and Prices*, 1931, Volume I, Chapter III.

A very short discussion of the matter contained in this section is given by A. D. Gayer: *Monetary Policy and Economic Stabilisation*, 1935, pages 183-186.

3. For the origin of the gold standard in Great Britain, see A. E. Feavearyear, *The Pound Sterling*, 1931, Chapter III; or J. L. Laughlin: *Money, Credit and Prices*, 1931, Volume I, Chapter IV, Sections 5/7.

For the Bank Restriction Period, there is a very good account given by R. G. Hawtrey: *Currency and Credit*, 1923, Chapter XVI, and a longer account by A. E. Feavearyear: *The Pound Sterling*, 1931, Chapter VIII. These two authorities take rather different views of the suspension.

For the adoption of the gold standard by Europe, see R. G. Hawtrey, *Currency and Credit*, 1923, Chapters XVIII and XIX, and Irving Fisher: *The Purchasing Power of Money*, 1911, Chapter XI.

J. L. Laughlin: *Money, Credit and Prices*, 1931, Volume I, Chapter VI, discusses the Latin Monetary Union in a somewhat hostile manner.

4. The views of those who thought that the old gold standard was automatic are dealt with more fully in Chapter XIII, Section 1.

Some remarks by Hartley Withers: *Bankers and Credit*, 1926, Chapter I, rather suggest that the gold standard was automatic.

See also A. D. Gayer: *Monetary Policy and Economic Stabilisation*, 1935, pages 9-11.

Concerning Bank Rate, see Hartley Withers: *The Meaning of Money*, 1932, Chapter XII, and D. H. Robertson: *Money*, 1935, Chapter VIII, Section 3.

An excellent account of wartime and immediately post-war history is given by D. H. Robertson: *Money*, 1935, Chapter VI. There is an account with considerable detail by J. L. Laughlin: *Money, Credit and Prices*, 1931, Volume II, Chapter XVI, Sections 2-6.

The subject of this section is also well dealt with by R. G. Hawtrey: the wartime period in *Currency and Credit*, 1923, Chapters XIII and XIV; the post-war period in *Monetary Reconstruction*, 1926, Chapters VI and VII.

The abandonment of the gold standard in 1931 is admirably described (at considerable length) by G. D. H. Cole: *What Everybody Wants to Know About Money*, 1933, Chapter II.

Quite a different view of the departure from gold is taken by F. Benham: *British Monetary Policy*, 1932, Parts I and II.

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(There are many who do not agree with Dr. Benham's views.)

The latest events, which have not yet found their way into books, can be studied in the recent numbers of *The Economist*; this excellent weekly journal has a good quarterly index, but this is naturally not so detailed as the index of a book.

CHAPTER X

THE GOLD STANDARD AND THE FOREIGN EXCHANGES FURTHER CONSIDERED

§I

The mechanism of the foreign exchanges, and the effects of their operation. Bills of exchange and treasury bills. The bill on London. Purchasing power parity theory and its limitations; day to day fluctuations.

It will be well to inspect the operation of the foreign exchanges a little more closely than has been done in the last chapter. Firstly, let us dispose of some misleading phraseology: it is frequently reported, in the financial press and elsewhere, that "foreign money is flowing into England", that "there is a large volume of foreign money (or foreign balances) in this country", or that "Frenchmen are transferring their funds to London". These and similar expressions are likely to conjure up visions of stealthy financiers arriving at dead of night bearing strong-boxes full of thousand-franc notes, or that they are somehow making a net addition to the volume of money in the London money market by some other means. These things do not happen.

For reasons which will be mentioned later in this section, Frenchmen (for example) may want sterling. They go to the foreign exchange dealers and give them francs for the number of pounds which is equivalent at the prevailing exchange rate. If the sum in question is large, they probably do not take sterling in the form of notes; the stock of pound notes in Paris is quite small, being kept for persons who want moderate sums for making small payments, such as those incurred in travelling in England. The Frenchman wanting a large amount of sterling will probably take it in the form of a deposit at one

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of the large English banks, let us say at the National Provincial (which is the easiest one for M. François to pronounce).

We may suppose that M. François has fear that the franc is going to fall gravely. (Perhaps to "transfer funds abroad" is unpatriotic; bah! it is necessary that one protect oneself.) So he goes to the Crédit Lyonnais, the largest of the French banks, and what happens is this: M. François's account at the Crédit Lyonnais is debited with (say) 1,050,000 francs, and their sterling deposit at the National Provincial in London is debited with £10,000, since the rate at the time is 105 francs to the £1. That leaves the Crédit Lyonnais as before, except that more of its resources are in francs and less in sterling. Then a deposit is opened at the National Provincial in the name of M. François for £10,000. Very likely this is done by the Crédit Lyonnais telephoning the National Provincial,¹ or perhaps by sending a telegram, a process known as telegraphic transfer (or simply TT).

One of the important points to realise is that there is no more money in London than before: the National Provincial has only transferred £10,000 from one of its customers to another. If M. François is going to get sterling, someone must part with it.

Of course, if he were to ship gold from Paris to London, that would be another matter, but here we are concerned with normal exchange movements; furthermore, if the two countries were not on the full gold standard, or if the new type, the gold reserve standard,² were in being, he could not get gold to ship.

Why, then, is so much notice given to foreign exchange transfers like M. François's? What are their important effects? Now we found the Crédit Lyonnais losing sterling and gaining an equivalent amount in francs; one of the two important effects results from this. For we may assume that the sterling balance which the Crédit Lyonnais had in London was about the size which it found necessary for the convenient transaction of its business in England. It is thus impelled to restore its stock of sterling: it enquires of other banks, and they will sell sterling to it for francs, but only at the price at which

¹ Actually, the Crédit Lyonnais has its own branch in London through which its exchange dealings would naturally be done.

² See Section I of Chapter IX.

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they think they can buy pounds to replenish their own stock; for they too want to keep up their London balances. In this way, there may be enquiries all round the Paris money market for sterling; it is this desire to buy which sends up the price of sterling, just as a keen desire to buy copper will send up the price of copper, or, in other words, makes more francs exchange for £1. We assumed that the rate was 105 francs to £1: M. François's action might be enough to move the rate to 105½.

The other important effect arises from the employment which M. François finds for his money. Before the money stood to his account at the Crédit Lyonnais, he was, perhaps, the holder of French treasury bonds of short date, and it was the repayment of these by the French Treasury which put him in funds. If he no longer wants to hold the French bonds, that means that there is less competition among capitalists to buy these; now since it is this competition which keeps down the rate of interest upon them, there will be a tendency resulting from M. François's action for this interest rate to go up. And, since one interest rate does not move far without affecting others in the same market, we may say, more generally, that interest rates in Paris tend to go up. In the event, of course, they may not rise, because there are sure to be all sorts of other influences at work in the market; but this is the result which M. François's action *tends* to bring about.

Now when M. François has acquired the £10,000 in London, he probably does not keep it idle. We have supposed that he is actuated by the fear that the franc will fall; he is not contemplating locking up his funds in long-term securities; he wants to keep his money absolutely safe. So he buys English treasury bills, and this action evidently has the opposite effect to the one produced in Paris: interest rates in England tend to go down. Furthermore, if M. François acquires £10,000 worth of treasury bills, someone else is left without them, and there is that amount more seeking investment somewhere.

Alternatively, M. François might have wanted sterling because interest rates were higher in England than in France. Thus we may say that "movements" of funds tend to equalise interest rates. While there is no fear that the full gold standard will be abandoned, this is true; but if fears of a currency

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depreciating are the ruling motives in the money markets, the relative levels of interest rates will be quite unimportant, and such movements of "panic funds" often enough widen the margin between interest rates in one centre and those in another.

Suppose a really large movement of money, millions of pounds, seeking investment on short term, takes place from Paris to London, so that interest rates in Paris go up considerably while those in London fall, whereas they had been approximately equal before; if the franc was exactly at par of exchange with the pound, it will now have moved almost to the gold export point and so be better to buy; if the full gold standard exists and there is no fear of its overthrow, a powerful incentive has been generated to transfer funds the other way: firstly, there is a chance of making a fractional profit when the funds are brought back from Paris to London, since the franc is low now and will probably be higher in terms of pounds later on; secondly, rates of interest are higher in Paris than they are in London, so that funds in Paris will earn more than they will at home. Thus, so long as the full gold standard is assured, we may say that a really big movement of funds will tend to have an equal and opposite reaction, or, if we want another form of words, to be self-correcting.

Before the War, when the volume of bills of exchange was much larger, compared with the volume of money seeking investment on short term (which we may refer to as short-term funds), another corrective to big transfers was influential. If, as often happened, large funds were accumulated in London, a good deal of these would be invested in first-class bills; this depressed the rate of discount on bills, and pushed up the pound in the foreign exchange markets. The lowering of the discount rates caused merchants to send more bills for discount in London, which sent up discount rates again and brought the pound down again.

Whilst bills of exchange drawn in foreign currencies are not unimportant in the London money market, the bulk of the "paper" is made up of sterling bills. Most of these arise in the course of Britain's own international trade: we buy Wheat in Canada, and the Canadian Wheat Pool draws a bill in sterling on the Millers' Association; we send glass beads to Africa, and the London merchant draws upon the native dealer

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in sterling. But sterling is also used to finance trade between two foreign countries: a Rumanian farmer, for instance, may sell wheat in England, and leave the proceeds with a London discounting house instead of turning them into his own currency; when he has to pay for fertiliser from Germany, he tells the suppliers to draw on the London accepting house in sterling; and they are pleased to do so, for a credit in London is the most liquid form of credit in the world, and much preferable to a credit in Rumania. In course of time, the accepting house gets to know the Rumanian farmer well, realises that he is a big man with great resources, and they will then accept bills for goods sent to him even though he has no funds in their possession. Furthermore, it is not unusual to find such a case as a Brazilian coffee exporter drawing on a German wholesaler in sterling; the German wholesaler is known in London, where the market will discount bills of this type too.

It is clear that business of this sort can take place, however, only when the value of sterling is not fluctuating by a margin appreciably greater than the old gold standard used to permit. If a bill were drawn on a German in sterling, and the pound went up by 5% in terms of marks, the German would be faced with an increase in his bill, on the date he had to buy sterling to meet it, which would probably swallow up all his profit. There is one way out of this dilemma with which we will deal in the next section. It would be unsound to argue that the German importer might equally have the chance of making an additional profit from a depreciation of sterling, and so find the sterling bill just as attractive in times of exchange fluctuation as in quiet times: he is not a monetary expert, prepared to use his knowledge of financial conditions to hazard his fortunes in this way. Indeed, largely because of currency disturbances, finance of this sort has been of much less importance since the War than before it.

It would seem, from what we have said, that, for all the sterling funds in London owned by foreigners, there must be equivalent balances held abroad by Englishmen. But this is not so. If England imports more goods from abroad than she sells to other countries, that will leave a net balance of sterling in foreign possession. England might "live beyond its means" in this way, so long as foreigners were prepared to amass sterling balances, without any downward tendency on

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the foreign exchanges. To be more exact, we must bear in mind Prof. Hoot's discovery that there are many other dealings on the foreign exchange markets besides those contracted in connection with imports and exports of goods: there are dividends due on foreign securities held by Englishmen, and interest earned by English capital funds held abroad; money due from foreigners for shipping, insurance and banking services performed for them by Englishmen; and sums sent home by Englishmen abroad.¹ These are current income items which tend to raise the pound on the foreign exchanges. The only large current income item tending to depress the pound is the expenditure of Englishmen living or touring abroad.

In addition, there are items on capital account: if a London bank lends the Latvian government a million pounds to balance its budget, this sum is clearly required in Latvian money; the pounds are sold for lats, an operation tending to depress the pound. Similarly with an issue of shares by a company to build a railway in the Argentine.² Such operations are called exports of capital. Repayments (imports of capital), on the other hand, tend to raise the currency of the country receiving them on the exchanges.

So we see that, if England has an adverse (also called a "passive") balance of trade, that is, if her imports exceed her exports of merchandise,³ the pound may still be kept steady by the other items.⁴ So we must strike a balance of payments, and say that sterling balances can accumulate in the possession of foreigners if England's balance of payments is adverse.

Just this situation did arise between 1925 and 1931: England was virtually importing capital, of the dangerous, short-term type. It kept the pound up, but when the great depression came on, foreigners began to fear that England must have suffered some grievous losses in the financial crises in Austria and Germany. They therefore "withdrew" their

¹ Not large. In the case of the United States, immigrants' remittances to European countries are a large item.

² With the difference that the railway material may be bought in England and shipped to Argentine, an export of merchandise which will partly offset the export of capital.

³ This is known as the visible balance.

⁴ The other items are known as the invisible items: receipts from shipping services, for instance, are described as invisible exports; exports of capital are, rather provokingly, invisible imports since they affect the exchanges in the same way as imports of merchandise do; it may help to think of exports of capital as being imports of foreign securities.

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balances; that is, they sold the treasury bills and other short-term securities they held, obtained sterling balances (some held their resources in the form of deposits already), and changed these balances into francs, dollars and other currencies. This pushed the pound past the gold export point and led to shipments of gold; while the crisis was acute, these reached the remarkable figure of £25,000,000 in nine days; the Bank and the government borrowed, between them, £130,000,000 worth of francs and dollars to support the pound on the exchanges, but it was no good: Englishmen, as well as foreigners, were buying foreign currencies with their deposits: the gold standard had to be abandoned and the pound allowed to fall.

If we say that this "flight" of short-term balances forced the pound off gold, we must remember that there would have been no great net¹ volume of foreign-owned deposits except for the adverse balances of payments on long-term capital account and on income account during the preceding years. We had more than adequate foreign capital assets, of course, but, like an ill-managed bank, we had lent long and borrowed short.

These adverse balances of payments resulted from the pound being re-established upon the gold standard in 1925 at a level which proved too high.² It was the old pre-war level, but that constitutes no sufficient criterion. What is the criterion, then? The criterion, and it is not an entirely simple and satisfactory one, is that exchange rates should be such that the pound shall have the same purchasing power in England as the franc has in France, and the dollar has in the United States, and so forth.

If a composite commodity, made up of specified amounts of all the important articles of trade, costs £100 in England, \$500 in the United States, and 10,000 francs in France, then the exchange rates ought to be £1 = \$5 = 100 francs (\$1 = 20 francs). This is the substance of the principle, rediscovered by Prof. Gustav Cassel after the War, and known as the purchasing power parity theory.

Dr. Coot, in his practical, business-like manner, is inclined to interpret the purchasing power parity theory in too narrow

¹ Not counterbalanced by English-owned short-term balances in foreign centres.

² Some economists argue that "courageous" deflation could have corrected this maladjustment: notably, Prof. Lionel Robbins: *The Great Depression, 1934*.

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a sense. He says: "Yes, I see this: if so much wheat costs £1 in London, 100 francs in Paris and \$5 in Washington, the exchange rates must be £1 = 100 francs = \$5; otherwise it would pay to move wheat from one place to another; for instance, if the price were £1 or \$5, but the exchange rate was \$4 = £1, it would pay to change dollars into sterling, buy wheat in London and ship it to Washington. The depletion of stocks in London would send the price up there; the increased supply in Washington would bring the local price down, and the purchases of sterling would increase its value in terms of dollars. All these movements might leave the price of wheat at £1 2s. 0d. and \$4.50 in the two centres, and move the exchange rate to—wait a minute—\$4.09 = £1. That would make it just right."

But then a shadow of doubt crosses the mind of Dr. Coot. "Obviously," he adds, "this is true of things like wheat, but you can't say the same of houses or the cost of railway fares or anything like that. And anyhow, purchasing power can always differ between one currency and another by the cost of moving the goods—I mean, wheat can be more expensive in London than in Washington by the amount of freight charges, etc., or the other way round."

The last observation is quite true. But Prof. Hoot points out to him (with geometrical illustrations) that his idea of purchasing power parity theory is a mere truism: if it is to apply only to international trade goods, it *must* be true. In fact, the price of wheat (for example) in London is virtually arrived at by taking the current figure in Winnipeg, turning that into sterling at the existing exchange rate, and adding on the transport costs. By analysing costs of exports with the utmost rigour (going backwards in time even unto the third and fourth generations), the learned Professor then shows that *all* prices in the home market ultimately enter into international trade goods costs; and hence that the purchasing power parity theory must be applied to all prices.

Dr. Coot's counterstroke is masterly: applying the theory to the prices of all goods, he produces statistics to show that, in fact, purchasing power differs markedly between different currencies which are clearly in something like equilibrium.¹

¹ Meaning, in this respect, that there is no considerable tendency present for the existing exchange rates to alter; for example, no gold shipments are taking place.

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And these statistics are not only correct; they are typical.

Hoot returns to the charge by pointing out that people in different countries spend their money on different things, and on the same things they expend different proportions of their incomes, such that exact statistical correspondence is not to be looked for.

But this does not dispose of Coot's objections: treated in this way, a theory whose utility depends upon measuring small differences, of the order, say, of 5% or 10%, proves to be inaccurate to a much larger degree.

Nevertheless, we can make use of this theory by applying it in a relative sense over time: if we find that in the last year the purchasing power of the pound (as measured by index numbers) has gone up 5%, and that of the franc has gone down 5%, we have a definite indication that the pound ought to have gone up by about 10% in terms of francs. During periods when exchanges have been free to vary, it can be shown statistically that this happened with sufficient frequency and exactness to be interesting. If, however, the gold standard exists, so that exchange rates are not free to vary, we have a measure of the disequilibrium which has developed: in our example, supposing the pound and franc to be still on gold at the old parity, we should say that the franc is now over-valued by about 10%; the rate is still 100 francs = £1, and it ought to be about 110 francs = £1.

Even so, some allowances must be made: a change in world demand for a country's exports can affect profoundly the value of that country's currency 'in terms of others', whilst the price changes affect the purchasing power of all currencies to an approximately equal extent. For instance, if drought ruined all the tea crops except the Chinese one, the value of China's exports of tea would increase very greatly; the consequently increased purchases of Chinese currency would send up its value in terms of other currencies appreciably. No indication of this necessary adjustment would appear from comparisons of purchasing power.

Similarly, changes of supply can have a disturbing effect. If China suddenly produced ten times as much tea, the exchanges might be affected somewhat gravely. If the demand proved to be very elastic, and the tea sold at little under the figure per lb. of the year before, then the value of Chinese

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exports goes up, so strengthening her currency on the exchanges, with nothing in the comparison of purchasing power to show the necessity for this. Contrariwise, the increased quantity may knock the bottom out of the tea market, such that the supply, although ten times as great, sells for a total sum one-half as much as was realised the year before (amazingly inelastic demand). This depresses China's currency, of course, with no indication that it ought to go down from the comparisons of purchasing power.

Again, the imposition of higher tariff rates will render the equilibrium rate for the currency of the protecting country higher than it otherwise would be.

Further, if the huge mass of British emigrants (who went abroad, of course, after the—fascist or communist—dictatorship was established) suddenly find themselves able to send handsome remittances back to the poor old folks at home, then sterling will be strengthened, whilst the comparison of purchasing power would lead one to expect, if anything, a depreciation of sterling. This is so in the case of all one-sided transfers. If capital invested abroad suddenly began to pay dividends again, the same effects would be produced.

Lastly, capital movements, which are normally large scale transactions, may disturb the exchanges from time to time.

Thus it appears that considerable allowances must be made in applying purchasing power parity theory statistically, but that it remains the only criterion of what exchange rates ought to be. We need only add that seasonal purchases of a particular currency¹ will temporarily disturb the appropriate exchange rates, and that day to day fluctuations will still occur on account of the fact that the balance of payments does not equalise itself in the short run.

§II

The forward exchanges: spot and forward; the deferred contract; why a request for security is sometimes made; method of quoting; above spot meaning a discount, and below spot a premium. The high development of the London market.

¹ Many countries have "export seasons": notably those whose exports consist largely of a single crop.

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The factors governing forward rates in relation to spot: short-term rates of interest, ring work, forward supply and demand, fear and Exchange Funds, speculation. Big fluctuation prohibiting a forward market. The desirability of forward dealing; but the peculiarity of exchange speculation, that it may cause the effect it fears.

Besides the type of foreign exchange dealing which we studied in the last section, there exists another sort of contract quite common in the exchange market. We found M. François, suddenly put in funds by the repayment of French treasury bonds, exchanging francs for sterling because he expected a fall of the franc. A month before his bonds had been repaid, he could have effected virtually the same transaction: he could go to the Crédit Lyonnais and make a bargain with them that he would exchange his 1,050,000 francs with them for sterling in one month from the date of the contract. This is called a "forward" exchange operation; it is contrasted with an actual exchange of francs for sterling there and then, on the day he goes to his bank, the latter being called a "spot" transaction.

When M. François buys sterling forward, the rate is agreed at the time of making the contract; the whole point is to avoid having to deal at the unknown rate which will be the spot rate of the day a month later. M. François does not have to pay for the sterling until he gets it, though the Crédit Lyonnais may ask for security if it is not sure whether its customer is reliable.

Why should a bank ask for security? It would seem that, if the customer cannot find the money on the due date, the bank will retain the foreign money and so run no risk of loss. Yet a bank selling foreign exchange forward does run a risk, because it at once covers itself by buying that foreign currency spot. For example, suppose M. François buys sterling one month forward at 105 francs = £1: he is contracting to exchange 1,050,000 francs for £10,000 a month later. Thus the Crédit Lyonnais buys £10,000 the same day as the contract is made, and keeps it, let us say, on deposit at the National Provincial Bank in London, so as to have it ready for M. François on the agreed date. For simplicity, let us suppose that the spot rate is the same as the forward rate: thus the £10,000 costs the bank 1,050,000 francs. Now if M. François were a man of

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no means, who disappeared and failed to fulfil the contract, the Crédit Lyonnais would be left with the £10,000; meanwhile sterling may have fallen to the rate of 100 francs = £1, so that the £10,000 is now worth only 1,000,000 francs. M. François's failure to fulfil the contract has turned the Crédit Lyonnais into an unwilling exchange speculator, who realises a loss of 50,000 francs. Hence the demand for security sometimes made by a bank to those making forward contracts with it.

There are only three customary periods for which forward exchange contracts are made: one month, two months and three months; anything else is very rare.

The method of quoting for forward contracts is somewhat unusual: instead of giving simple figures, like \$4.90 $\frac{1}{4}$ and 105.40 $\frac{1}{2}$ francs to £1, the method employed is to quote so much discount or so much premium compared with the spot figures. Thus on 21 January 1937 we find the following quotations:¹

Spot: New York \$4.90 $\frac{1}{4}$ -4.90 $\frac{3}{4}$.
Paris " frs. 105 $\frac{3}{2}$ -105 $\frac{3}{4}$.

Forward:	New York	1 month,	$\frac{1}{4}-\frac{3}{8}\%$	premium.
		2 months,	$\frac{1}{2}-\frac{7}{16}\%$	premium.
		3 months,	$\frac{1}{16}-\frac{5}{8}\%$	premium.
	Paris	1 month,	$\frac{9}{16}-\frac{2}{8}$	frs. discount.
		2 months,	$1\frac{3}{16}-1\frac{5}{16}$	frs. discount.
		3 months,	$1\frac{7}{8}-1\frac{15}{16}$	frs. discount.

Thus, if Dr. Coot, being very well informed, decides to speculate on a rise in the dollar, he buys dollars, say £100,000 worth, three months forward, hoping that by the time he comes to pay for them he will be able to sell them spot for more than he agreed to pay for them. Now spot dollars are 4.90 $\frac{1}{4}$ -4.90 $\frac{3}{4}$: that means that the dealers will sell to him at 4.90 $\frac{1}{4}$ and buy from him at 4.90 $\frac{3}{4}$; the $\frac{1}{2}\%$ difference in favour of the dealers between these two figures represents the margin from which they make their profits. The three months premium is $\frac{11}{16}-\frac{5}{8}\%$. We subtract the $\frac{11}{16}\%$ from 4.90 $\frac{1}{4}$, leaving 4.89 $\frac{9}{16}$; this is the price Coot can buy at to-day for delivery and payment three months hence. Thus his £100,000 realises \$489,562.50. On the other hand, if he had been a seller three months forward for the same amount, the rate at which the market would have bought from him would have been \$4.90 $\frac{3}{4}$ less $\frac{5}{8}\%$,

¹ *The Economist*, 23 January 1937, page 210.

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which equals \$4.90 $\frac{1}{2}$; thus he would have contracted to provide some dealer with \$490,750 three months hence in exchange for £100,000.

It may seem rather surprising that we subtract the premium from, and, conversely, add the discount to, spot quotations. But if we think carefully, this is all right: for a discount on forward francs evidently means that francs three months hence are now reckoned to be worth less than francs to-day; the more francs we get for a pound, the less they are worth; so, to make the three months quotation lower than spot, we must add the discount on. Contrariwise, the fewer dollars we get for a pound, the more they are worth; the premium indicates higher value, so we subtract the premium to show fewer dollars and cents for our £1 three months hence.

A premium is also known as "under spot", and a discount as "over spot"; thus we can say one months dollars were $\frac{1}{4}-\frac{8}{16}$ under spot, and two months francs $1\frac{3}{16}-1\frac{5}{16}$ over spot on 21 January 1937. (Notice that if forwards are at a premium, we put the larger of the two fractions first, and if they are at a discount, we put the smaller fraction first.)

The method of quoting forward rates arises from the fact that the whole purpose of the forward rates is to give a comparison with spot rates: if, instead of quoting two months dollars as $\frac{1}{2}-\frac{7}{16}$ (premium),¹ dealers had told us that the rates were $4.89\frac{3}{4}-4.90\frac{5}{16}$, we should have had to enquire as well what the spot rates were.²

A forward exchange market is a highly specialised type of dealing, and one which is little understood outside the banks and smaller dealers who compose the market. It is the sort of institution which is to be found only in the most highly developed financial centres, so that no surprise will be felt that the London forward market is far in advance of others, both in the volume of its transactions and in the attractiveness of the rates quoted in it; that is, the buying and selling rates are closer than elsewhere.

Now what are the factors governing the forward exchange rates? Or, to put the question a little differently, why should

¹ The fact that the larger figure was said first would tell us that it was a premium.

² This point will become clearer when double transactions have been dealt with later in this section.

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forward rates diverge from spot ones? Let us consider a time like the present one, which we may describe as one of tolerable exchange stability with large and sudden movements still regarded as possible; there is not the old attitude of pre-war confidence, which would have regarded 5%-10% movements of the exchange rates as "aberrant, scandalous and avoidable"; neither is there prevalent the immediate post-war feeling that anything might easily happen at any time without warning. We are between these two extremes, and in such circumstances the incidence of commercial demand plays a part, though by no means a decisive one, in fixing forward rates. For instance, suppose that Lancashire dealers are fixing large contracts with American cotton shippers for the bulk of the American cotton coming to this country, for delivery three months later: Lancashire brokers will buy dollars three months forward; (that is not a speculative operation; it is speculative not to cover in this manner). At this time it happens that there are noticeably fewer enquiries by Americans for sterling three months forward; that is to say, there is a large balance of forward dollar buying; this tends to push three months dollars to a premium.

Now watch the arbitrageur at work! He perceives dollars at 10¢ premium: he therefore sells dollars three months forward and buys the same amount spot. Say the rate is \$5 spot, and therefore \$4.90 three months forward: he contracts to sell \$490,000 and buys \$500,000; the latter cost him £100,000. When the three months has passed, he hands over \$490,000 from his New York balance and gets back his £100,000; and he is left with \$10,000 in New York, or about £2,000; and this amount of clear profit, earned (without any exchange risk) in three months, is equivalent to interest at 8% per annum—a handsome figure. In addition, the arbitrageur has had a balance of \$500,000 in New York in his possession, and that will have been used to earn interest. Thus the arbitrageur operates to bring the spot and forward rates together: by selling forward dollars, he tended to send down their value, and by buying spot dollars he tended to increase their value.

The limit to the operations of an arbitrageur are twofold: in the first place, the amount of funds at his disposal—indeed, the total funds in the arbitrage market—are not inexhaustible.

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This explains how, in times of great uncertainty, these extraordinary margins come about: a discount or premium equivalent to 8% per annum is by no means unknown, though we are taking an imaginative, and not a likely, example when we suppose a 10¢ premium on three months dollars at a time like the present.

We might expect that, if the arbitrageurs had not enough funds to equilibrate the spot and forward rates of all the various currencies (without involving any exchange risk), that the public would come in and do it for them. But the forward exchange market is a close affair: its members deal among themselves or with known merchants covering future commitments, but not with a member of the public espying a very sound and certain profit. Indeed, in the smaller financial centres, the forward market is little better than a ring, in compact to maintain a somewhat wide margin between buying and selling rates; this can prove a powerful negative force permitting variations of forward from spot rates.

In the second place, a limit is provided to the scope of arbitrage by the smallness of the margin between forward and spot: if we find three months dollars at $\frac{1}{2}\%$ discount on a spot rate of \$5, that is equivalent to only $\frac{2}{3}\%$ per annum, which is not enough to warrant the transaction in times like the present, when better use can be found for the money. We may find the forward rates exactly at par. (exactly equal to spot rates), as the Dutch rates were on 21 January 1937.

In times like the present, there are some foreign currencies whose forward rates are determined by the above considerations, and by "interest differentials", which will be described in a moment. The dollar is typical of these steady currencies. Other currencies are largely governed by speculative transactions, that is, forward selling without any spot buying, or forward buying without spot sales as covering. Some currencies' forward rates are so governed most of the time, and most forward rates are so governed some of the time.

M. François, having heard that the French Treasury will have to borrow heavily from the Banque de France (an inflationary action) during the coming quarter, feels sure that the franc will fall, and, having no ready money available, he sells francs three months forward—very convenient for a speculator, for he does not require any money until the end of the three

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months; and if francs do fall, he does not really need it then. Of course, francs may in fact go up by reason of unforeseeable influences; then he loses. But these forward speculators have a habit of being right; as a rule, a currency goes the way the forward rates suggest. To this point we shall return at the end of the section.

Furthermore, there are the Exchange Equalisation Funds: the British one never operates in the forward market—never yet. The French one does do; the others may do. It is understood that the others will do so if they see a useful purpose in it, and probably some of them have done so, rather tentatively, already; they keep their operations secret, and sound information on the subject is not plentiful.

We mentioned the "interest differential" as an influence in the forward market. In very quiet times, especially when the rigid gold standard is firmly established, the difference between short-term interest rates in one centre and those in another (which is what the interest differential means) is usually the chief factor governing forward rates. If short-term rates were 2% in England and 4% in America, it would clearly be better to have funds in America and earn the higher rate. Even with the gold standard assured, some variation in spot rates occurs, and the arbitrageur does not have to leave his position uncovered. But to take advantage of the higher New York rates, everyone in the London market wants to buy spot and sell forward, so as to have a dollar balance for the interim; this can be used to buy (say) United States treasury bonds discounted at 4%. But if all the market is trying to buy dollars spot and sell forward, that drives the spot rate up and the forward rate to a discount; thus the discount on forward dollars represents the reward to those people who consent to hold funds in London, where less can be earned.

When the rigid gold standard is assured, the merchant having commitments in foreign currencies has little to worry about: the rate may move fractionally against him, but, unless he is dealing in very large quantities of foreign merchandise with a very small percentage of profit on his turnover, the small movement of the exchange rate will not seriously affect his profits. And it may, equally, add something to, instead of detracting from, them. But it is otherwise in times such as we have experienced during the last five years.

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For instance, a French manufacturer runs his factory on coal imported from England. His order book is full for six months: that is to say, he has contracted to sell products whose manufacture will occupy the factory for the coming six months; in costing these future products, he has included in his calculations £1,000 worth of coal to be delivered and paid for in a month's time. The present exchange rate is 80 francs to £1, so he has included 80,000 francs in his costs; he has omitted to cover by buying £1,000 one month forward. During this fatal month, the franc falls to 100 to £1, perhaps because France goes off the gold standard or devalues her currency. Thus, what he included as 80,000 francs, actually costs him 100,000 francs—a loss of 20,000 francs, which will eat away a substantial part of his profits.

In some sorts of business, a 10% movement of the exchanges may easily mean ruin to a merchant who has not covered himself in the forward market. But if he covers, he is safe. Thus we might expect great activity in the forward market in times of somewhat severe currency fluctuation. Yet, in fact, it is just in those times that the forward markets break down, and dealing comes to a standstill. (Hence the severe effect of exchange fluctuations on international trade.) It is not easy to see why this takes place. It is customary to speak of no exchange risk existing in a double transaction; but, looking at the matter from the point of view of the exchange dealer, there is risk, and plenty of it, if his customer fails to fulfil the forward contract. And times of dislocation, such as to produce acute exchange fluctuation, are the times when customers, normally regarded as sound, suddenly collapse without warning. Again, the market will be anxious to limit irresponsible (non-professional) speculation, so that unwanted customers are looked upon with suspicion as speculators parading as merchants, and the facilities of forward dealing are frequently refused to them.

Yet, when these things are said, it still seems that the forward market shrinks unnecessarily in unsettled times. Perhaps—and this is a mere guess by the present writer, possessing no actual contact with the market, compiling facts second-hand from other people's works—perhaps the dealers' nervousness arises from some half-conscious fear of their balances abroad being impounded, and even the transfer of those to

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months; and if francs do fall, he does not really need it then. Of course, francs may in fact go up by reason of unforeseeable influences; then he loses. But these forward speculators have a habit of being right; as a rule, a currency goes the way the forward rates suggest. To this point we shall return at the end of the section.

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When the rigid gold standard is assured, the merchant having commitments in foreign currencies has little to worry about: the rate may move fractionally against him, but, unless he is dealing in very large quantities of foreign merchandise with a very small percentage of profit on his turnover, the small movement of the exchange rate will not seriously affect his profits. And it may, equally, add something to, instead of detracting from, them. But it is otherwise in times such as we have experienced during the last five years.

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For instance, a French manufacturer runs his factory on coal imported from England. His order book is full for six months: that is to say, he has contracted to sell products whose manufacture will occupy the factory for the coming six months; in costing these future products, he has included in his calculations £1,000 worth of coal to be delivered and paid for in a month's time. The present exchange rate is 80 francs to £1, so he has included 80,000 francs in his costs; he has omitted to cover by buying £1,000 one month forward. During this fatal month, the franc falls to 100 to £1, perhaps because France goes off the gold standard or devalues her currency. Thus, what he included as 80,000 francs, actually costs him 100,000 francs—a loss of 20,000 francs, which will eat away a substantial part of his profits.

In some sorts of business, a 10% movement of the exchanges may easily mean ruin to a merchant who has not covered himself in the forward market. But if he covers, he is safe. Thus we might expect great activity in the forward market in times of somewhat severe currency fluctuation. Yet, in fact, it is just in those times that the forward markets break down, and dealing comes to a standstill. (Hence the severe effect of exchange fluctuations on international trade.) It is not easy to see why this takes place. It is customary to speak of no exchange risk existing in a double transaction; but, looking at the matter from the point of view of the exchange dealer, there is risk, and plenty of it, if his customer fails to fulfil the forward contract. And times of dislocation, such as to produce acute exchange fluctuation, are the times when customers, normally regarded as sound, suddenly collapse without warning. Again, the market will be anxious to limit irresponsible (non-professional) speculation, so that unwanted customers are looked upon with suspicion as speculators parading as merchants, and the facilities of forward dealing are frequently refused to them.

Yet, when these things are said, it still seems that the forward market shrinks unnecessarily in unsettled times. Perhaps—and this is a mere guess by the present writer, possessing no actual contact with the market, compiling facts second-hand from other people's works—perhaps the dealers' nervousness arises from some half-conscious fear of their balances abroad being impounded, and even the transfer of those to

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another person of the same nationality being forbidden. If this should form a part of the proper explanation, it may be said that the possibilities envisaged carry a weight disproportionate to the likelihood of their realisation.

Lastly, there is the question of whether forward dealing is desirable. In general, it is; it helps to modify fluctuations which would be greater without it. The strictly arbitrage section, the effect of which is to bring spot and forward rates together, has a smoothing effect distinctly beneficial. The help given thereby to merchants doing international trade is great, and might, apparently, be greater than it is. And when the speculator moves a forward rate to a premium, or a discount by his operations, the fact that he is usually right justifies him: he too helps to eliminate sharp fluctuations, whose power for evil is proportional to their suddenness.

But to the last proposition, concerning the speculator, a proviso must be added, and it is a very important one. Speculators on the foreign exchanges (spot or forward) have the peculiarity that they may, in certain circumstances, tend to bring about the event they fear—or hope for! The wicked speculator is no mere invention of the sensational press. We know that if shares are bid up too high, or pushed down too low, on the stock exchange, they come back within a relatively short time: if the shares of a shipping company are sold as the result of a false rumour, the ships go on running just the same, and the prospect of normal profits brings someone, probably the professionals, in to buy the shares at the advantageous price.

But consider a case of this sort: the French government is more or less in straits for money, as usual; it contemplates floating a large internal loan; the speculators then gather together and sell francs for all (and much more than all) they are worth; the franc falls precipitously. Are French capitalists going to invest in the prospective loan? Clearly not: investment abroad will be safer if the franc is so untrustworthy. Thus the floating of the loan is put off; perhaps the government falls. But money must be had from somewhere. If a loan is impossible, where can it come from? Only one place: the Banque de France. But government borrowing from the central bank is inflationary, tending to raise the price-level, and therefore to depress the exchanges. In other words, the

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fall of the franc, which was artificial to start with, has forced the government to act in such a way that a lower level becomes appropriate. The speculators win—to the detriment of France.

This is no hypothetical case, but a real one, a grizzly business, mixed up with politics of no very reputable order. But there is reason to hope that methods are now available for frustrating such operations. In the first place, there are the vast resources of the French Exchange Equalisation Fund, part of whose purpose is to prevent the evil effects of speculation. Indeed, speculators were caught ("squeezed") as a result of authoritarian action long before the Fund existed. And, in the second place, there is the agreement, formulated among the Exchange Funds in September 1936, when the Gold Bloc fell, to co-operate in eliminating unnecessary fluctuations. If their combined skill and resources are not enough to ward off the danger from speculators, then we had better return to the days of barter!

§ III

The case for and the case against the gold standard: the irrelevance of gold resources. Any international standard. The short run; and the long run. What sort of a world? International indebtedness on long and short term; frozen assets. Can we do without international lending? Seasonal movements.

Scattered throughout the foregoing chapters are threads of arguments for or against the gold standard, which it will be convenient now to gather together. We shall examine the matter again from the broader angle of monetary policy in Chapter XVI.

We may begin by examining an argument of which much was heard during the difficult years immediately preceding the abandonment of the gold standard by Great Britain and other countries in 1931, namely, that there was not enough gold. It followed from that premise that there was, so long as the proportion of gold to currency could not alter significantly, not enough currency, and therefore that the aggregate resources of means of payment was deficient. Whatever merit there may have been in that argument, and its value was certainly ques-

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tionable even then, it is quite irrelevant to the present position. By common agreement among themselves, the central banks of the important countries can simultaneously devalue all their currencies by an equivalent margin: for instance, with the present price of gold at \$35 and (say) 142/- per fine ounce (giving an exchange rate around \$4.90 = £1), it would be possible to devalue, let us suppose, by 10%, raising the American price to \$38.50 and the British one to 156/2½d. This leaves the dollar-pound exchange rate undisturbed, and sends up the value of both countries' gold stocks by 10%. If the leading countries act in co-operation (and smaller countries will follow their lead), there is no reason why they should not write up the value of their gold stocks by any percentage they want. They can make the same bar of English standard gold, weighing 400 ounces, now worth about £2,600, increase in value to £3,000, or to £10,000 if they wish; to bring its value down to £1,000 or even to £2,000 might be very inconvenient; but there is no difficulty about raising it.

Now when it was contended that there was not enough gold, the argument did not mean that there were not enough ounces of gold in existence; that does not matter; the argument meant that the aggregate value of monetary gold stocks was not large enough. Thus, if the value of aggregate gold stocks can be altered in the manner described, there exists no fear of a gold shortage.

Clearly, it always has been possible to write up the value of gold stocks; the difference between the present time and the period before the financial crisis of 1931 is this: now, central banks are quite prepared to take steps of this sort; in 1931, they were not; indeed, at that time, the financially orthodox regarded such things as wrong almost in a moral sense. Now, too, they have agreed (September 1936) to co-operate; before, they pursued separate, and often antagonistic, policies. The co-operative policy would be brought into play for just such a step as equivalent and simultaneous devaluation.

There used to be a variation of the gold shortage argument, alleging that there was "maldistribution" of gold; that is, that some countries (notably the United States and France) had too much and others too little. A far sounder argument than the gold famine proposition, it is no longer a sound objection to the gold standard. The stocks can be written up all round, if the

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piling up of gold in one or two centres threatens others with shortage. In any case, the co-operation agreement of September 1936 made arrangements for the transfer of gold reserves from one central bank to another, a provision which we have described as the establishment of the gold reserve standard. So long as this provision is in force, there is no need for any maldistribution to occur. As an argument against the earlier forms of the gold standard, the maldistribution contention retains somewhat serious force.

What are we really discussing when we talk about the gold standard? We are considering the merits and defects of an *international* standard; it does not really matter that the standard in question is gold; if the only purpose of the reserves is to be used as international counters, handed round from time to time among the central banks, the reserve might be composed just as well of lumps of lead stamped with particular marks, or of notes of the Bank for International Settlements¹ for that matter.

The days when gold gave security against internal depreciation of a currency belong to the past. The only purpose of a standard nowadays is to prevent external depreciation. Thus, when we speak of the gold standard, we are really discussing whether we want the pound, dollar, etc., to be rigidly stable in terms of all currencies.

What, then, are the merits of stable exchanges? Stable exchanges facilitate international trade and lending. And the drawback of stable exchanges is that the financial policy required to maintain them may keep a large number of men unemployed, entailing the direct economic loss of the output which they might have produced, and a social loss, which most people estimate as the more serious, through the degradation of those unable to find work.

It is very enticing to say that we cannot begin to think about stable exchanges until all our unemployment is absorbed. Naturally, everyone wants unemployment to disappear, but when we realise that the worst unemployment persists in the Depressed (or so-called Special) Areas, and that these are the districts where our great volume of exports used to be produced, then we perceive that the problem is not so simple.

¹ See Chapter XV, Section 3.

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There is no doubt that the best way of bettering the Depressed Areas is, in the short run, by increasing the volume of international trade. Probably we shall not be able to restore it to its pre-depression level, whatever we do; but we can, given international peace, do something.

But we will put forward this argument: that we can get our short-run increase in international trade without establishing any more rigid form of the gold standard than we possess at present. Even if one country does have to devalue by a moderate margin (say about 10%) from time to time, the development of the forward exchange market, which would not be difficult in somewhat quiet times, should provide sufficiently simple technical security for a greatly enhanced volume of international dealing in goods. At the same time, we should not be faced with the necessity of keeping a million or more in idleness for fear that the gold standard would have to be abandoned as a result of steps taken to re-employ them.

If we take a longer view, profound philosophical questions arise. In the long run, we can cure the Depressed Areas by the slow process of transferring the coming generations to other districts; we need not even do very much about it, for they will transfer themselves, given time. Thus, we need not for ever look askance at England's new tariff as a contributing cause of such local misery; the ties and associations which keep masses of unemployed immobile in a derelict place will not be strong enough to stop future generations from seeking their fortunes elsewhere.

The gold standard, bringing stable exchanges, was an integral part of the nineteenth century liberal philosophy. The standard of life rose at an unprecedented pace during the period when those ideas were being put into practice, and it is still true that international trade, the geographical division of labour, would permit of higher standards than isolated national self-sufficiency can yield. In any case, we ourselves *must* have some international trade, for, even in the further future, we cannot foresee a time when Britain will be self-supporting in food supplies.

But perhaps we prefer an autarchic world, or one wherein trade between nations is reduced, at least, to a scanty necessary minimum; perhaps, even if we want more international

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trade, the fear of war, or the propaganda of politicians, will persuade us to live unto ourselves. In that case, we shall not bother about the foreign exchanges; full employment will be our criterion, and it must be remembered that it is a very excellent criterion to have as a guide to monetary policy. Yet we must remember, too, that it is not just "employment" pure and simple that we seek; we want employment at a reasonable standard of life; to take an extreme example, we could easily employ everyone by stopping imports of food, but whether they could scratch from the soil enough to keep themselves alive is doubtful.

International lending is more sensitive than international trade to stability in the exchange market. In a period of great exchange fluctuation, international lending is extremely difficult, and it used to be customary to advocate the old gold bullion standard as the *only* condition permitting such capital transactions between nations. But surely it is no more than a debating device to advocate the gold bullion standard as the only method of avoiding *extreme fluctuations*? No extreme fluctuations need be looked for under the present semi-gold standard conditions (the gold reserve standard). If we have moderately stable conditions, disturbed now and again by devaluations of middling size, what would the effects be?¹ The most sensitive section of international lending is the short-term fund, a mass of liquid assets, owned by persons of sundry nationalities, who prefer their resources to be held now in one currency and now in another according to the current prospects. In the days of the gold circulation standard, London found it very convenient to attract such money by Bank rate changes, though other centres did not find the technique so simple. Those days are gone, but the fluidity of the short-term funds has continued, moved now by fear rather than the reward from interest differences. Indeed, the fluidity of these funds has proved a menace, and they will never form an essential part of gold standard mechanism again. It might be argued that the greater rigidity of the gold bullion standard would have the desirable effect of *stopping* such funds being so mobile. English and American bankers lent great sums on short term to

¹ We need not consider fluctuations due to war, because no sort of gold standard would survive the outbreak of war; and international lending between private persons and corporations would cease anyhow.

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Germany before 1931, because no one would lend to Germany on long term; when the financial crisis came, they were faced with the prospect of leaving their funds there, or taking what they could get for them, since the German debtors could in no wise pay back in foreign currencies all they had borrowed. Such misfortunes as these might be avoided, it could be argued, because more money would be invested at long term with the greater stability which an assured gold bullion standard would give.

Now we shall not try to attribute the losses suffered by the bankers on these "frozen" assets to the gold standard; they were due to special causes connected with Germany's post-war monetary difficulties. It is perfectly true that international lending would be more hazardous with exchange parities not considered to be unalterable. Short-term funds may well be more mobile, but if we are going to look upon this as a drawback and not as a virtue, there is a more effective remedy at hand than the rigid fixing of the exchanges. For it is one of the most important functions of the Exchange Equalisation Funds to counter sudden speculative movements: what speculators sell, they buy, and this neutralises the effect of the speculation on the exchange rates.

If, on the other hand, it is argued that movements of short-term funds might still be desirable, there again the Funds come in, for they can sell securities if it is necessary to raise interest rates in a certain centre, or buy them to lower interest rates.

But even if short-term lending no longer has the significance which it once had, there remains long-term lending. The Argentine would not have had its railways built so early, for instance, and countless enterprises would not have been started in "new" countries, without the provision of capital by the old, developed countries. The loss from not exploiting the resources which have been made productive in this way would have been enormous. And there is still large opportunity for new enterprise in backward places. All these things are true. But it must be emphasised that long-term lending abroad is not going to yield the rewards in the future which it reaped in the past: the scale upon which it can still take place usefully is by no means so great as during the last century; the economic advancement of the countries of the world

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is by far more equal than it was fifty or a hundred years ago. The "vast, undeveloped areas" are not what they were. By not developing them at all, we are not going to lose anything comparable with what the nineteenth century would have lost by prohibiting international lending.

It need not be supposed, indeed, that some instability of the foreign exchanges would preclude international lending altogether. It would no doubt diminish the volume somewhat, and some will regard this as a grievous fault. Others will be consoled, perhaps, by the thought that less international frictions may be engendered. Concerning a considerable proportion of international loans and investments, political considerations outweigh economic ones in the lending country; doubtless such lending will not be deterred by the fear of moderate exchange instability; whether such lending ought to be considered desirable, however, will depend largely upon the nationality of the person considering the question.

The whole question of lending among nations is too large to examine in detail in the present book. We may say, in broad terms, that some flexibility in the exchanges would bring about no decisively evil effect in this connection.

Finally, we may dismiss a minor argument sometimes put forward in support of the rigid gold standard. Currencies are subject to seasonal pressure arising from the fact that a very large balance of external payments is concentrated within a few weeks of the year. This tendency is less marked than formerly on account of the greater number of sources now supplying the important articles of international trade, and because the aggregate volume of international trade has declined. Such seasonal pressure as remains can be met without establishing the full gold bullion standard for the purpose: the movements are well within the capacity of Exchange Equalisation Accounts to counteract, and no evil effect is to be expected from such use of the Funds' resources.

Without going into the matter very deeply, then, we have reached the conclusion that the present semi-gold-standard conditions have great virtues: our gold reserve standard possesses in large degree the virtues of the gold bullion standard, and is free from its decisive defect, namely, the necessity of pursuing a monetary policy entailing large scale unemployment.

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BOOKS

1. For the foreign exchanges, see Hartley Withers: *The Meaning of Money*, 1932, Chapter X; and particularly the excellent account given by P. Barrett Whale: *International Trade*, 1932, Chapters I and II. Chapter III of Mr. Whale's *International Trade* deals admirably with the many aspects of the purchasing power parity theory.

Prof. Gustav Cassel has written much regarding this theory: see, for instance, the tenth and eleventh essays in his work, *The Foreign Exchanges After 1914*, 1922.

In addition, a very instructive examination of purchasing power parity theory has been made by Mr. Keynes: *A Tract on Monetary Reform*, 1932, Chapter III, Section 2.

Everything dealt with in this section, and much cognate and associated matter besides, are given by Aylmer Vallance: Chapter V in *What Everybody Wants to Know About Money*, 1933 (edited by G. D. H. Cole).

2. See J. M. Keynes: *A Tract on Monetary Reform*, 1932, Chapter III, Section 4. A good brief summary is given by Norman Crump: *A First Book of Economics*, 1934, pages 89 and 90.
3. For views favourable to the gold standard, see T. E. Gregory: *The Gold Standard and Its Future*, 1932, Chapter V; also Frederic Benham: *British Monetary Policy*, 1932, Part III, Chapter XII. Unfortunately, both of these are somewhat out of date.

See also *The Report of the Committee on Finance and Industry*, 1931 (The Macmillan Committee), Cmd. 3897, paragraphs 251-254.

Lionel Robbins: *The Great Depression*, 1934, Chapter VIII, Sections 1/3.

Hartley Withers: *Money*, 1935, Chapters VIII and IX.

The whole of Mr. A. D. Gayer's book, *Monetary Policy and Economic Stabilisation*, 1935, is relevant to the problem; particular attention should be given to the succinct and lucid statement contained in pages 144-160.

The advantages of the gold standard, rather than its drawbacks, are stressed in Mr. R. G. Hawtrey's study, *The Gold Standard in Theory and Practice*, 1933.

For a hostile examination, see J. M. Keynes: *A Treatise on Money*, 1930, Chapter XXXV.

CHAPTER XI

ALTERATIONS IN THE VALUE OF MONEY

§I

Inflation.

- (i) *Inflation defined.* Metallic inflation: gold discoveries.
Are two metals more stable than one? Inflation and population: the Black Death.
- (ii) *Paper inflation:* inflation of paper money by the state.
Inflation by banks. Inherent instability of credit.
Crises.

(i) From time to time, we have mentioned the word inflation in earlier chapters, without stopping to define precisely what we mean. It will be agreed that such a rise of prices as that during the Great War was due to inflation, and also that the word has an evil flavour to it. Yet a precise idea of what the term is supposed to mean is very hard to find, and it is frequently employed in a loose and careless manner.

If we think of the theoretical discussions of Chapters VII and VIII, however, it should be possible to state the matter clearly. We shall not regard *any* rise of prices as inflation; in particular, we shall exclude a slow and moderate rise coming after severe depression. If prices are rising in such a way that, when full (voluntary) employment is reached, the rise ceases and general stability, or a very slow fall (due to improvements and inventions) occurs, then we can describe the rise as *reflationary*. If the value of money is falling (prices are rising) when employment is full, we shall have no hesitation in describing this state of affairs as inflation. But this is not the only case: if, while there is still considerable unemployment, prices are rising at such a speed that a crisis will occur if the rise is curtailed, when (not before) full employment and maximum output are reached, that, too, is inflation.

Besides being applied to general prices, inflation can also be said to occur in particular organs of the economic body.

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There can be inflation of profits, such that the economic optimum (full employment and maximum output) is reached after a depression *without* a rise of general prices, which, nevertheless, is bound to occur *after* the optimum is reached; profits might also become inflated if prices remained constant, with economic activity constant at the maximum, while costs were falling as a result of inventions and improvements in production. An inflation of profits may be identified with Mr. Keynes's Q being positive¹ in a state of full employment.

We can also speak of an inflation of capital-goods, meaning the condition in which their prices are so high that more of them are being currently produced than can be used at a profit. Inflation of wages (which has hardly ever existed) would indicate full employment with profits at less than normal.

It follows from the preceding remarks that any sort of a monetary system can yield inflation:² even if the quantity of money were fixed, its velocity of circulation might increase, so causing a general advance of prices. It may be emphasised here that inflation is rare, for we have defined the word in relation to full employment; that is, a state wherein involuntary unemployment (other than transitional unemployment) is absent. And the outstanding economic characteristic of the modern state is chronic unemployment.

With a monetary system consisting entirely of gold pieces in circulation, it would be possible to have inflation; this may be called metallic inflation. It would occur almost certainly if stocks of gold were small, and large new supplies were discovered. We shall quote examples of this in the next chapter.

Not so obvious is the case wherein the velocity of metallic money is increased. The fear of invasion in a primitive country might lead border folk to bury their treasure against the evil day; if war were averted after a long interval of suspense, a noticeable increase in the velocity of circulation might well occur, resulting in the resumed sale of goods at their "proper" prices. An occurrence of a slightly different nature resulted from the fall of the Persian Empire, for Alexander the Great put into circulation the great golden hoard of Darius III.

¹ See Chapter VII, Section 2 and (especially subsection iii of) Section 3.

² When we write the one word, inflation, without qualification, it will signify inflation of the general price-level.

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We can see now the origin of the argument, put forward by bimetallists, that two metals are more stable than one. It might well be true, and it might be very important—for a nation of long ago. Early in the world's history, however, the stock of bullion was so small that changes in supply, if large, might have required a change in the ratio of exchange between the metals. (There was a period in the earliest history of Egypt, for instance, when silver was more valuable than gold.) If, then, there were a double standard, great dislocation might result: whether the dislocation arising from a change in the established ratio would be greater than that resulting from a large increase in supply of the one standard metal must remain an open question. The period when bimetallism, *if properly understood*, would have been superior to gold monometallism lies between the earliest days of history and the present time, but it would involve too great detail to examine this matter.

We should notice that general inflation can occur as a result of population changes: if population increases rapidly, while the aggregate of money remains stable, the consequent rise in the velocity of circulation is likely to outweigh the countervailing decrease in the volume of money per head; further, a rapid increase of population is likely to increase output less than proportionately—another factor tending to raise prices.

To speak of a slow fall of population is not easy, for this has seldom occurred, whilst the effects of a slow rise are usually obscured by changes in the volume of money.

There are, however, a few examples of a rapid fall of population, notably that resulting from the Black Death, the terrible bubonic plague which swept over Europe in the middle of the fourteenth century. Whilst the statistics are little better than guesses, perhaps it is true that some two-fifths to a half of the population of England perished; thus the volume of money per head was roughly doubled. If we think of the matter in terms of Prof. Irving Fisher's equation, $MV = PT$,¹ we can say that M remained constant; V perhaps advanced, but we can neglect the change in this term; T decreased, perhaps not by 50%, but still by a very large proportion. Thus we should expect P approximately to have doubled. In fact, it certainly did not do so at first, and the ultimate effects were

¹ See Chapter VI, Section 3, and Chapter VII, Section 3 (subsection).

somewhat obscured. But this examination does explain satisfactorily the sudden and tremendous rise in one important class of prices, namely, wages. Indeed, the period immediately succeeding the Black Death furnishes almost the only known example of an inflation of wages. The general inflation did come, but it lagged somewhat long behind the rise of wages, thereby changing the course of history!

(ii) The more familiar forms of inflation are those resulting from the excessive issue of paper (or deposit) money, either on the part of the state, or by the banks. It has usually been the exigencies of war which have forced the state to inflate. The simplest method is to print notes which are made legal tender. So long as the people will accept them in payment, the printing-press provides the government with a supply of money wherewith to pay for its extraordinary requirements. It is the fact that the expenses (of paying the military forces, providing armaments, munitions, provisions, transport, and perhaps subsidies to allies) *are* extraordinary that forces the government to inflate; ordinary revenue cannot be increased in time, and borrowing from the public and the banks on the scale necessary can usually be done only after some measure of inflation has taken place.

Instead of printing notes, the government can borrow from the central bank, whose liabilities constitute the basis of the credit system. It can borrow notes or it can borrow deposits; it makes no difference which. Let us consider how these borrowings raise the level of prices: the government pays, for example, £10,000 to an army supplies contractor by cheque on the central bank; the contractor pays the cheque into his joint-stock bank; the central bank changes the sum of £10,000 from the balance of the government to the balance of the joint-stock bank; the joint-stock bank adds £10,000 to its liabilities (to the contractor's credit balance) and £10,000 "cash"¹ to its assets; but that disturbs its cash ratio; if its ordinary ratio is one of cash to ten of deposits, it is in a position to lend £90,000—not £100,000, for it has already added £10,000 to the deposit of the contractor. Very likely this £90,000 will be lent to the government; if the bank buys treasury bills, that is lending to

¹ "Member" banks count deposits at the central bank as equivalent to currency in their tills, since they can withdraw such deposits in the form of currency.

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the government, and so it is if long-dated war loan is bought instead.

The difference between printing notes and government borrowing from the central bank is not great from the public's point of view. If the loans are ever repaid or the notes withdrawn, the government gets the money to do this by taxing the people.

Inflation by banks is a more subtle affair. The deposits standing to their customers' credit form, in a country like Great Britain, the bulk of the money used. And about half of these deposits are the result of loans (advances) made to their customers by the banks themselves. Naturally, such loans are made at interest; indeed, they earn for the banks a higher rate of return than any of their other assets do. It is easy to see, then, that the banks want to lend as much as possible to their customers;¹ if they find themselves with currency to spare, they lend more freely. And they can induce their customers to borrow in three ways: in the first place, by accepting as collateral such securities as they may have refused earlier on; secondly, by increasing the size of the loan given on securities already held by them; thirdly, by lowering the rate of interest on loans.

What we wanted to establish was the fact that banks have something to gain from expanding loans, and some power to do it. Now increased lending is what we called (in Chapter VIII, Section 2, subsection iii) a cumulative process: the more the banks lend, the greater is the demand for loans; for their lending enhances prices and therefore profits,² and more people want to borrow to exploit the improved business conditions. Banks always want to increase their loans, and, the more they do so, the more certain it is that the increase will have to stop (and probably be reversed). This is what is meant by the inherent instability of credit.

If banks lower their cash ratio, which is equivalent to an increase in currency from the point of view of ability to lend,

¹ Customers must, except in rare cases, provide security; they virtually pawn shares easily saleable on the stock exchange, government securities and the like with the banks; if they fail to repay their loans, the bank keeps the securities.

² Since profits are the difference between selling prices and costs, and some elements of costs (fixed charges and wages) do not rise so fast as general prices; and since the value of entrepreneurs' stocks of goods goes up.

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they might generate an inflationary boom of this sort all by themselves. Usually, however, inflation results from the banks obtaining (literally) more cash. How, then, can all the banks, considered together, get more cash? One bank can sell some of its other securities, but that only adds to its deposit at the central bank at the expense of some other bank's deposit there. The only really important way in which more cash, which might form the basis of inflation, can be found, is by the central bank adding to its liabilities and so increasing the member banks' deposits with it.¹

But a central bank is unlikely deliberately to engineer inflation, except in time of war, and then it will be doing only what the government orders. Its own profits are a minor consideration; its duty is to control the monetary system to the best advantage of the whole country, and, whether it is a private institution owned by shareholders (like the Bank of England), or whether it belongs entirely to the government (like the central bank of Sweden, the Sveriges Riksbank), or whether the member banks subscribed its capital (as they did for the twelve central banks of the United States, the Federal Reserve Banks), the central bank performs its difficult and all-important duty to the best of its ability.

Nevertheless, a central bank may well "expand credit" (increase its liabilities) and, later on, have to contract them. Receiving gold from abroad, it may lower Bank rate and buy securities, so putting member banks' accounts in funds; prices begin to advance and it begins to lose gold; thereupon it sells securities and puts up Bank rate. Member banks have thus lost currency and must contract their loans and put up rates; they refuse to give new loans, and would-be borrowers are therefore unable to do the business they intended. But general market prices were only kept at the higher levels by the prospect of the business which cannot now be done for want of loans; so prices fall, and the fall of prices brings losses. If the position really is inflationary, prices fall suddenly a long way; that brings bankruptcy; the only method of avoiding bankruptcy is to get a loan to tide over until markets go up again. But new loans cannot be got: there is a crisis, perhaps hopeless panic: everyone trying to sell, no one wanting to buy;

¹ A "member" bank is, in general, any ordinary joint-stock bank, and particularly one possessing a deposit at the central bank.

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prices falling headlong; even the oldest and soundest firms suspected of being insolvent; if there are many small banks, numbers of them will collapse. But if the member banks are few and very wealthy, like the British ones, even a serious crisis is unlikely to cause a run on them.

The familiar circumstances of stringency and crisis which we have touched upon can occur, of course, without inflation, in the strict sense in which we have defined it, having been present at all.

§ II

Deflation: accidental (adoption of the gold standard in the nineteenth century), and intentional. The velocity of circulation and the price-level. The psychology of deflation. The vicious circle. Impulses making for recovery.

Deflation is, in a sense, the opposite of inflation: deflation thus indicates a fall of prices, greater than that required by progress in methods of production,¹ resulting in a decline of economic activity to anything less than the optimum; in particular, if involuntary unemployment is present and increases (other than through an increase in working population), then deflation is clearly present. As in the case of inflation, we can refer to deflation in a particular part of the economic system; profit deflation, capital-goods deflation and so forth.

Deflation is unpleasant: because output falls off, real wealth falls below the potential; still more does the appearance of wealth shrink: from being "worth quarter of a million", a man finds he is worth only £20,000, a change spiritually as well as actuarially depressing. It is not surprising, therefore, that deflation is frequently accidental, and, when intentional, is adopted only because the alternative (which is not always inflation) is considered highly undesirable.

Thus we find the adoption of the gold standard by Europe after the Franco-Prussian War bringing deflation. There was

¹ "Required" in the sense that they will necessarily occur if wages remain constant; a rise in wages as the result of progress is clearly an alternative to a fall in prices.

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something of a gold scramble; the increased demand for it increased its value at a time when supplies were not plentiful; the devices adopted to secure it brought deflationary depression. We are accustomed to thinking of the Victorian era as one of prosperity, but English manufacturers at the time termed the period from 1871 to 1896 "the great depression" (an expression with other associations for the people of to-day!), and complained bitterly of German competition. Throughout that period, there was never unemployment upon the tragic scale to which we have become accustomed, and output was not considerably below the potential, but there was a deflation of profits, made all the more painful because the returns to entrepreneurs had been buoyant in the two previous decades. It is significant that German competition was made the villain of the piece: full comprehension of a deflationary situation belongs almost entirely to the years since the Great War.

Post-war slumps are well-known phenomena, arising from a desire on the part of monetary authorities to return to the general conditions of the pre-war period ("the good old days"), and particularly to the pre-war price-level. Attempts at price-restriction do not belong only to the present time,¹ and it has not always been the futility of that policy which has deterred governments, desirous of putting the clock back, from adopting it; yet the preference does seem to lie in favour of deflation, as a method of bringing prices back to normal, and against price-cutting decrees, according to the testimony of the past. We can make excuses on the ground of their ignorance for the statesmen responsible for deflation in times gone by; but, even so, there are the modern examples.

What, then, are the repellent alternatives which have driven authorities to choose deflation? Usually the dread of wild, uncontrolled inflation. This undoubtedly supplied the motive for the British deflation after the War, and for the drastic deflationary steps (for long singularly ineffective) taken to curb the Wall Street boom of 1928 and 1929.

Another motive with the same effect is the desire to maintain the currency on the gold standard. Countries exporting wheat and other primary products (the South American repub-

¹ Consider particularly price-fixing in Germany as an example of present restriction.

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lics, for instance) are especially likely to be forced off the gold standard by reason of the great fluctuations in the aggregate value of their exports; they are accustomed to let their currencies fall rather than face deflation. Great Britain, on the other hand, submitted to depression, a stagnant period resulting from deflation and unrelieved by reflationary recovery, from 1925 to 1931, in order to maintain the pound on gold; it is very doubtful, however, whether such an experience will ever be tolerated by a nation again.

When accused of bringing about depression, monetary authorities, or their apologists, have sometimes pointed indignantly to the volume of money existing in their country, showing that it is not less than at some earlier date when prosperity ruled, in order to absolve themselves from the charge of deflation. But, even if the figures be corrected for increase in (adult) population, this is not the whole story. The velocity of circulation can fall while the volume of money remains stable or increases somewhat, and cause deep depression. It is broadly true, for instance, that bank deposits fell only slightly during the great depression of recent years. The figures for the United States are as follows:

DEPOSITS, VELOCITY OF CIRCULATION, AND WHOLESALE PRICES OF THE UNITED STATES, 1926-1933

Year.	DEPOSITS.* †			VELOCITY OF CIRCULATION.* ‡			WHOLESALE PRICES.	
	\$000,000.	Index.	% Difference from year before.	Absolute.	Index.	% Difference from year before.	Index.	% Difference from year before.
1926	29372	100	—	1.72	100	—	100	—
1927	30816	105	+4.9	1.82	106	+5.8	95	-5.0
1928	32330	110	+4.9	2.08	121	+8.8	97	+2.1
1929	32160	109	-0.5	2.42	141	+16.3	95	-2.1
1930	32345	110	+0.6	1.71	100	-29.3	86	-9.5
1931	30825	105	-4.7	1.30	76	-24.0	73	-15.1
1932	25363	86	-17.7	1.06	62	-18.5	65	-11.0
1933	23423§	79	-7.6	1.10	64	+3.8	66	+1.5

* From Table 15, given by L. Robbins: *The Great Depression*, 1934, page 217.

† Total deposit of all member banks.

‡ Ratio of debits in 141 Federal Reserve cities.

§ Licensed banks only, after March.

|| From Table 6, given by L. Robbins: *The Great Depression*, 1934, page 208.

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These statistics we may illustrate as follows: in Figure I, the straight line (—) represents the percentage difference in deposits from the year before; the dash line (---) represents the percentage difference in velocity of circulation from the year before; and the dotted line (.....) represents the percentage difference in wholesale prices from the year before.

Figure II illustrates the three indices: the straight line is deposits, the dash line velocity of circulation, and the dotted line is wholesale prices.

From these statistics it appears:

1. that the changes in the velocity of circulation were much greater in both directions than the changes in the volume of deposits;
2. that in the two most vital years, 1930, when the depression became really grave, and 1933, when recovery began, the volume of deposits diverged significantly from the index of wholesale prices;
3. that the correspondence between the index of velocity of circulation and the index of wholesale prices was remarkably close in the later years.

We are entitled to sum up the position by saying that, in a modern community, there are significant indications that the velocity of circulation is more effective in regulating the price-level than the volume of money is. (The divergence of the velocity curve in 1928 and 1929 is to be explained by the extraordinary volume of dealings in stock exchange securities which took place in those years—the Wall Street boom and crash. The price-level of securities is not, of course, included in the wholesale price-level.)

When deflation has once begun, strong psychological forces come into play to perpetuate it. Those who are filled with optimism, and neglect the warning signs as the coming of deflation approaches, will lose the more heavily; a proportion of such men will fail and go bankrupt; the pessimists lose least, and appear to their fellows as sound men whose advice should be followed. The pessimists will buy only small stocks of goods, and defer the date for renewals of plant; they will reduce their loans from the banks, and perhaps close down some of their works altogether; they will reduce their staffs to the minimum, and banish all thought of launching out into

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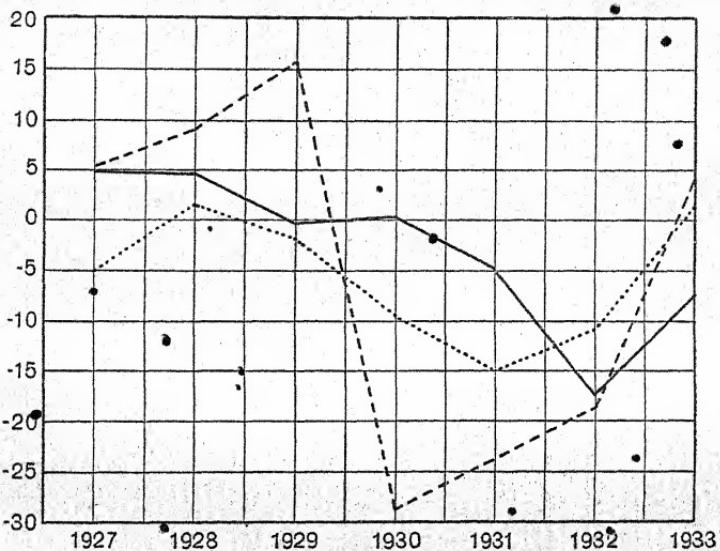


FIGURE I.

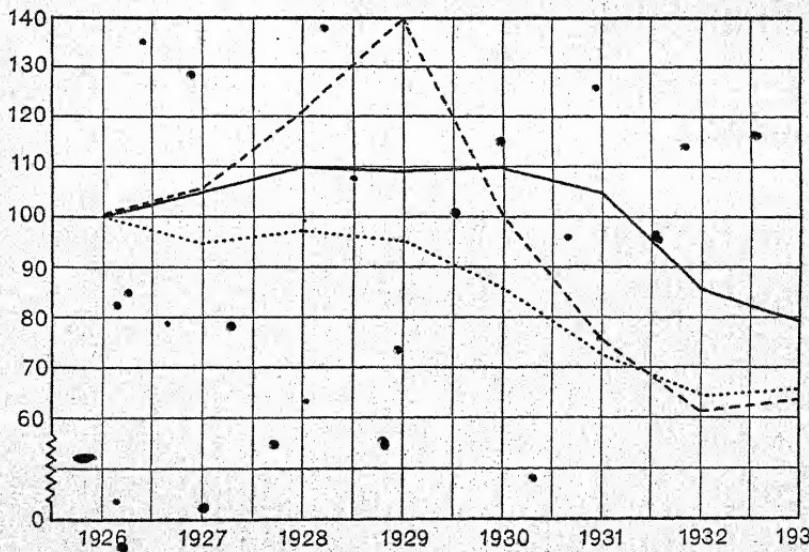


FIGURE II.

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new lines of business. Now these are the sensible things for a capitalist to do, if the bad times are going to continue, and perhaps get worse. But what business men do not perceive is the all-important fact that this cautious curtailment of activity itself causes the deflation to go on; it intensifies the slump and prolongs it.

For all these costs, which the capitalist is no longer prepared to incur, made up somebody's income; if business men buy less and employ less, the nation's income falls, and so there is less money to spend on their products; as their losses continue, so they contract their output more and more, which only causes further losses. This is what is called the vicious circle (or spiral) of deflation.

Some business men do, no doubt, perceive this underlying truth, but they also see that, during a period of contraction, the man who loses least is the one who contracts his business more than the others do. They perceive that the man who has come out best so far is the gloomy Sir Percy Pessimist, who has closed half his works and employs his men only two days a week in the rest. In the prosperous times, Sir Percy was considered rather an unenterprising man, very cautious and conservative; but, since the depression, adventurous and enterprising rivals have failed or retired, and old Sir Percy suddenly emerges as one of the leaders in his line of business. When he comes into the Chamber of Commerce meeting, radiating gloom, and tell his friends how he has cut down his losses by selling his warehouse to the Post Office, other men scratch their heads and wonder if they could manage without a warehouse, or scheme to shut their offices and carry on with a roll-top desk in the corner of the warehouse.

All these "economies" help to strengthen one man against his competitors, but ruin everyone in the long run. How, then, is the vicious circle ever broken? Why should contraction not go on until everyone is bankrupt, including the government and its creditors?

The answers to these questions are really complicated matters; we can touch on only two of the main reflationaly impulses. In the first place, there is the force of custom and habit, which operates in the following way: a family which is used to a certain standard of life will curtail its expenditure somewhat in bad times: less on entertainments; fewer clothes;

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stay at home for holidays; simpler food; perhaps move into a smaller house. But beyond a certain level, it will be very loath to go: rather than live too meanly, and fall in the estimation of friends and relations, the family will spend its savings, hoping, of course, to make good the wastage in better times to come.

It is the expenditure of savings which comes in to fill the gap created by contraction on the part of the business world. When the annual¹ amount spent out of savings exceeds the amount by which one year's¹ income falls short of the last year's,¹ a net reflationary push is given to the economic mechanism.

But what about the poor, who have no savings, or only so little as to be exhausted quickly? Here the second reflationary force lies concealed. In a civilised country, it would be thought intolerable if numbers of people died of starvation: either the state or the local authorities step in and make provision for the destitute with relief donations. Now if the state raises the required funds by taxation, that does not help to bring reflation, except in so far as it causes those taxed to draw upon savings or not to save so much. Taxation for relief is the transfer of *income* from rich to poor, which does not increase aggregate expenditure. But if unemployment is really heavy (of the order of 10%–20% or more), the state may well be forced to borrow in order to pay unemployment benefit. It may, indeed, borrow wittingly, with a view to curing the slump. The whole of such borrowings are spent on current output; the fraction saved is certainly negligible and probably non-existent in most cases. And such spending acts like dis-saving, tending to raise the value of current production. That way the refiation of profits lies, and with the refiation of profits, the economic system is set for recovery.

¹ The statement of the matter in terms of years is artificial; a shorter period could be taken; a very short period (a day or a week) would not be significant, however.

§III

- (i) *The consequences of inflation and deflation: the gainers and the losers; ethical aspect. Inflationary stimulus to business and deflationary depression: which is better for progress? Unemployment: another ethical point.*
- (ii) *The effect on the exchanges: the limit of expansion by one country.*
- (iii) *Inflation and taxation: buoyant taxes in mild inflation; shrinking taxes in deflation. The real depreciation of revenue in thoroughgoing inflation. But inflation by the state is taxation.*
- (iv) *Deflation versus devaluation. Devaluation versus a capital levy.*

(i) Some people gain from inflation and reflation,¹ and others lose. We may notice that the gainers are the more powerful in the sense of exerting control over monetary policy, a fact which agrees with the general tendency, over the centuries, for money to depreciate in value.

Broadly speaking, the reverse holds for deflation: the gainers from inflation lose, and the losers during inflation gain.

It is clear that the different effects of these monetary movements upon different classes of people arise from the fact that all prices are not equally affected per unit time. If money were just doubled one night, and all prices and values doubled the following morning, the *relative* distribution of wealth and income would be the same, whilst the absolute figures would not matter in the least.

The first outstanding difference from such a non-existent case is the fact that wages do not rise (or fall) so fast as general prices. Another very important feature is that some payments are fixed by legal contract and cannot vary at all in the short run; in the long run, new contracts can be made, but in the long run the inflationary or deflationary situation will not exist any more. A great number of other payments, whilst not being actually fixed in law, are so standardised by custom and usage that raising them would cause an outcry: some wages (in the

¹ We shall speak of inflation in the following pages, but the remarks will apply in essentials to reflation also.

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(narrow sense) fall into this category, and subscriptions, and fees for the services of the professional classes, and the like. We may notice, in passing, that retail prices do not move so swiftly as wholesale prices, but we shall not have anything to say about this in the present chapter.

Now it becomes clear who the gainers and losers are, but we must remember that one and the same person may fall into both classes, gaining in one capacity and losing in another; such offsetting, however, does little to vitiate the effects of monetary movements.

First and foremost among the gainers in inflation is the ordinary business man, or entrepreneur: the price of his products goes up, but his raw material, or his stocks if he is a dealer, were bought some time before, when lower prices ruled; in this way he makes a clear windfall profit (of a speculative nature). In addition, the wages he pays do not advance so much; his men will be employed on overtime (or on full time in contrast to short time earlier on), and so feel happier about their earnings, since overtime is, in general, paid for, and that at higher rates than ordinary full time; thus they are not in the mood to strike for higher wages, though an understanding of the situation on the part of vigilant Trade Union officials has greatly reduced the lag in the increase of wages. Finally, the entrepreneur gains in a twofold manner on his overhead charges: because business is brisk, his fixed charges (notably interest on capital, rent and rates) can be spread over a larger real turnover; and the real turnover is itself worth more per article because prices have risen; thus the percentage of the cost per article attributable to fixed charges goes down for this reason as well. Certain overhead charges will increase somewhat, but the bulk remain fixed.

At the other end of the scale are the receivers of fixed income; in monetary terms, they get what they got before, but it buys less; they complain about the rise of prices, and refer enviously to business men as profiteers, not perceiving that the rise in prices is the cause, not the result, of entrepreneurial windfall profits. The chief fixed income receivers are those who own government securities, debentures and preference shares. The holders of ordinary shares are not fixed income receivers—quite the reverse. It is they who form the bulk of the entrepreneurs, for it is into their pockets that the enhanced

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profits of inflation go. Those who manage the great business undertakings are salaried managers and directors drawing fees, though these, indeed, do not lose in prosperous times.

Other fixed income receivers include landlords, whose income from rents cannot be adjusted quickly to higher levels of prices; and one other, the government, whose position we shall deal with in subsection (iii).

Midway between the business men and the fixed income receivers stand wage-earners. Compared with entrepreneurs they lose while inflation lasts, and gain compared with fixed income receivers. The position in inflation is decided, in general by the elasticity of their wage rates; if their wages move easily, they are almost akin to business men; if their wages are rigidly prescribed by custom, they are virtually fixed income receivers. But wage rates may not be so significant as the aggregate of wages paid, an aspect of monetary fluctuations to which we shall return in a moment.

We may sum up our findings by considering the opposite case of deflation: in deflation, business men lose, fixed income receivers gain, and wage-earners stand midway between the two so far as rates of wages are concerned.

The ethical aspect of monetary fluctuations is a controversial matter. We shall bear in mind that business men are the active section of the population, and we shall experience a natural tendency to favour them at the expense of the lethargic fixed income receivers. Thereforeavouring inflation rather than deflation, we shall feel some qualms, however, if we reflect that many of these active entrepreneurs are only ordinary shareholders, little better than stock exchange speculators. Bearing these contending ideas in mind, our choice between inflation and deflation will depend upon our estimate of the virtues of the capitalist system, judged both from the point of view of strict morality and from the point of view of expediency.

If we are content with capitalism, for the nonce or for all time, we shall say that both inflation and deflation bring about injustice; that both disappoint reasonable expectations, which are the practical criterion of capitalism. It follows that we shall seek stability, the golden mean between inflation and deflation, and that we shall deplore any departure from pre-existing conditions as a grievous disturbance which it is the

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duty of the monetary authorities to reverse, and to obviate in the future.

If we feel, however, that the present social conditions call for significant and prompt adjustment in favour of greater equality of opportunity, we shall view inflation with favour, as a force tending towards our goal; as a mechanism making for large accumulations on the part of enterprising business men, perhaps; but also as a device loosening the grip of the dead hand. Vast new fortunes can be dealt with by taxation, so long as we have an invisible ally, in the shape of inflation, which defeats the great vested interest entrenched during generations in hereditary endowments of "safe", fixed interest-bearing securities.

But whether we are conservatives, liberals, or socialists, we must think, too, of the effect of monetary policy on progress. Certain economists¹ argue that deflation stimulates enterprise; that stringent conditions compel and force improvements; and that ingenuity must necessarily be given rein to enable firms to survive during depression; in other words, that necessity is the mother of invention.

There are grave considerations throwing doubt upon such a simple point of view: invention is not a matter of necessity in the modern world, but rather one of organisation and research, which the business world has the resources to promote in full measure only during times of prosperity; that, in the gloom of depression, business men are not likely to venture into the uncharted seas of "new lines"; that capital cannot easily be raised to exploit new inventions. We may reflect that the unenterprising Sir Percy Pessimist is the man who comes to the fore in bad days. And we may reflect, too, that deflation has political repercussions which many people of democratic leanings will consider unsavoury: surely we cannot view with understanding the advent of a Hitler, for instance, without perceiving the essential relation to intolerable depression?

But if, in view of such considerations, we lean towards inflation, we shall not try to inflate too much; for there is ample evidence that the outcome of rapid inflation is chaos. We shall attempt only a very gradual inflation, one calculated not to

¹ Notably Prof. Robbins and Dr. Benham; also Prof. Hayek and others of the Austrian School.

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excite exasperation on the part of the classes of persons who directly lose by it; we shall not mind, if only it relieves the future generations, whom we have no right to encumber with the burdens arising from the sins of the forefathers. Some will view with horror the prospect of handing on a great weight of debt, which must not, they will feel, and shall not keep inheritors in perpetual luxury at the expense of others. Given a general inflationary tendency, time will be on the side of the people holding such views, and no doubt they will feel strongly that their duty to the future requires and prescribes in the most emphatic terms that they shall adopt a policy wherein time is on their side.

There is a further consideration: we have spoken of the effect of monetary fluctuations on wage rates. But, whilst it is convenient to treat the matter in this way, it almost misses the whole point; for a study of wage rates takes no thought of unemployment. We may approve wholeheartedly of the monetary earnings of the poorer people going up at the expense of bond-holders during inflation, and, equally, of the real income from wages increasing during deflation at the expense of the "bloated" entrepreneur; with these thoughts, we should feel confused as to whether inflation or deflation were preferable. We should feel no doubt of the matter, however, if we consider that deflation causes, and that inflation (or, more strictly speaking, reflation) cures, unemployment. If we presume to take the ethical standpoint, we cannot overlook the fact that, whoever else may be responsible for monetary policy, the working man and his family, who stand unprotected to suffer its most grievous effects, are not responsible. Some will find that it is the duty of those in authority, those of position and those of learning, to arrange that their less fortunate fellows do not suffer from the operation of monetary forces; some will be thoroughgoing and say that the direction of monetary policy is nothing less than a sacred trust.

We may attempt stability, rather than gradual inflation, but surely the thought of unemployment, and all that that means, will tilt the scales against deflation as a policy in any circumstances?

(ii) We need to assume only the approximate, broad truth of the purchasing power parity theory (which is undoubtedly), to

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perceive the effects of inflation and deflation upon foreign exchange rates. If England inflates, and the purchasing power of the pound drops at home, so it will do also in the exchange markets.¹ Indeed, the exchange rates are more sensitive to monetary policy (and to fortuitous influences) than are general prices. The announcement of even a mild reflationary policy on the part of a government will send its currency down swiftly and by a considerable margin in terms of other currencies, while the movement of general prices remains scarcely perceptible.

Conversely, the announcement of a deflationary programme, or such unmistakable signs of it as a rise in Bank rate, will raise a currency long before internal prices have begun to fall. And this sensitiveness is not surprising when we consider that foreign exchange dealers, in order to survive in their business, must be financial experts of a far higher order of excellence than the ordinary man in business.

But suppose that the old gold bullion standard exists and is to be preserved at all costs: then, if one country becomes more expansive than the others (either in the sense of inflation proper, or, more likely, in the sense of reflation), the effect is exactly similar to that suffered by a member bank which tries to lend too much. We know that such a bank will lose some of its central bank balance at the clearing; so also will an unduly expansive country. In this case, "the clearing" is represented by gold movements. If England expands the volume of money considerably more than other countries do, the pound will go out past gold export point, and she will lose gold. This means that England *must* contract again, since the gold standard is to be preserved at all costs. Conversely, an unduly contractive country must attract gold, and here the word, unduly, means no more and no less than relatively to other countries: it has no relation to the state of employment.

Thus we see that, so long as the gold bullion standard is kept in existence, countries must inflate or deflate in approximately the same degree; otherwise a country is in danger of being forced off the standard; and the fact of its being in danger is often enough to force it off the standard on account

¹ Under the gold reserve standard, the external value of a currency can be kept up while the internal value falls, or vice versa, by virtue of the action of an Exchange Equalisation Fund.

of currency speculation, which is another way of saying that it cannot risk getting to the danger point. From this fact arises the principle that, to conserve the gold bullion standard, countries must "keep in line" in their currency policies, a process sometimes known by the horrid term of "the principle of insteppedness". To accept this principle as the determinant of monetary policy is to permit the possibility of large scale unemployment.

(iii) We have mentioned the state as one of the sufferers from inflation; this proposition turns upon the degree of inflation (or reflation). If there is mild inflation for a long time, the state benefits: the Chancellor of the Exchequer's estimates are upset—in the right direction. For the buoyancy of business means that the class of incomes most important from the taxational point of view increases markedly: receipts from income-tax and super-tax exceed expectation; in addition, the revenue from import duties, which forms a considerable proportion of the whole budget receipts even in Great Britain, is enhanced in prosperous times.

During deflation, on the contrary, ordinary revenue sinks ominously. This is doubly awkward: the government has not only to retrench upon ordinary outgoings, but also has to make extraordinary provision for (or contribute to) unemployment benefit, the cost of which naturally advances in bad times.

If inflation is on a great scale, however, the government defeats itself. Its taxes are collected nearly a year after their imposition; if there has been rapid inflation in the interim, the monetary revenues budgeted for are probably exceeded by a great margin: they may be doubled even. But, in such a case, the purchasing power of the revenue, although its monetary size is enhanced by inflation, will have deteriorated. Instead of the £800 millions budgeted for, the Chancellor might, with thoroughgoing inflation, secure £2,000 millions; but he is likely to find that the level of prices has moved from 100 to 500, so that the huge revenue realised is worth very much less than the old revenue at the old price-level. This is not, indeed, the whole story, for by no means all of the government's expenditure fluctuates with the general price-level: as much as 50% in a modern state is devoted to interest payments in favour of government debt holders; these, of course, remain unchanged

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whatever happens to the revenue of the state. But rapid inflation is a cumulative process, getting swifter and swifter the longer it continues: the time very soon comes when the astronomical figure of revenue collected by the state is worth next to nothing in spending power.

We must not forget that the inflation we are considering may be engineered by the government—with a view, perhaps, to raising funds for the prosecution of a war. Inflation of this sort is in itself a form of taxation. If the government prints notes, or borrows deposits from the central bank, it is the existing holders of money who suffer, each according to his holding. The current benefits from inflation by the state are likely, at least at first, far to outweigh the real loss from taxation revenue. This explains the natural urge to inflate in wartime, for it seems the only practicable method of raising enough money in time.

If the state has borrowed from its nationals a, hopelessly large amount (as the French government did during and immediately after the Great War), so that an unbearably large portion of the maximum taxation tolerable must be spent in paying interest on the national debt, then inflation is probably the simplest way out. Perhaps, indeed, it is not the most honourable, for the victims do not realize that their debtor is deliberately engineering the real cancellation of part of their savings; the alternative, a capital levy, we touch upon in a moment.

(iv) If a phase of acute inflation has occurred, what is the best thing for the government to do? Should it try to deflate back to the former level of general prices, or should it try to stabilise at the current price-level? These are somewhat open questions. If there has been a sudden, very rapid inflation, the dictates of (capitalist) justice require deflation, at least in some measure. If a level greatly above that existing, say, two decades before, has been brought about gradually, there is a strong argument for stabilising at the current price-level. If, for instance, England, harassed by twenty years of earthquakes, each of which necessitated a new inflation, emerged, shock-proof, to find her currency standing at £1 = \$1, it would probably be wise for her to stabilise at that rate; that course would be devaluation.

But if England experienced an exceptional earthquake in November 1937, necessitating relief measures which could be financed only by a very inflationary policy, so that the exchange went to £1 = \$2, she would be well advised, knowing that the next catastrophe would not occur for many decades, to try to re-establish a rate approaching the pre-disaster level.

The case of deflation versus devaluation has usually arisen after a period of warfare. In general, it may be said that devaluation is preferable, if only because deflation, in a period when demobilisation is greatly increasing the number of those (very genuinely) seeking work, is bound to cause extreme hardship. If, however, the depreciation of a currency is only of the order of 5%, it may be worth while to deflate to that extent, in order to restore the old standard, if such action will also restore an uncomprehending but important confidence in the currency's soundness.

There is another course open to the government of a country whose (paper) currency has depreciated greatly on the exchanges. There could be a capital levy; that is, an enactment compelling every national to give a specified percentage of his total wealth to the state. The object of the capital levy is to enable the state to obtain possession of a proportion of its own obligations (the national debt) and also, usually, of the note-issue. When a proportion of these is acquired, it can be cancelled. Thus the total of debt within the nation is reduced; its real capital assets become thereby less encumbered, and, since these remain the same as before in real terms, the volume of debt secured by them is greater in value per unit. When part of the note-issue is cancelled, the value of the monetary unit is obviously enhanced in purchasing power and therefore in foreign exchange-value also. This is deflation of a kind, but not the slow torture involving a lowering of profits, stagnation of business and unemployment; it is a surgical operation to excise the redundant fat, obviating the attenuated and painful alternative of starvation.

Although Mr. Keynes lent his great authority in support of a capital levy in 1923, and although the important country of Czechoslovakia has put such a policy into operation with some slight success, there remain great objections to a capital levy. No one will question that it is the most straightforward and apparent manner in which retrenchment can be faced.

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At the same time, one must recognise the technical difficulties: the state does not want to acquire cows from the farmer, for instance; on the other hand, to require its nationals to pay their contribution to the capital levy only in notes or war loan also raises difficulties; for the people will feel very aggrieved if they have to realise some of their assets forthwith, obtaining only the very low prices which would prevail in a general selling movement; and if, alternatively, the government permits a considerable margin of time for the payment of contributions, that period is going to be one of ordinary deflation, which it is the purpose of wise statesmanship to avoid.

But more formidable than the difficulty of collection technique is the problem of preventing capitalists from transferring their wealth abroad. We may say that the latter difficulty can be overcome only at a time of very genuine and deep patriotic fervour; the quality of public unselfishness may be somewhat used up after severe warfare.

Further, a political programme including a capital levy is so vulnerable to electioneering opponents that it is almost impracticable in a democratic country; it would be cynical to say that it is too honest to be possible, but at least political opponents will be horribly tempted to put into operation the less noticeable alternative of devaluation, having permitted a further period of inflation, if necessary, in order to mitigate the burden of internal debt.

BOOKS

1. (i) See J. L. Laughlin: *Money, Credit and Prices*, 1931, Volume II, Chapter XXIV.

(Prof. Laughlin regards prices as being expressed in terms of a standard (gold), not in terms of money as such; thus the nature of prices changes with a change of standard, although they are still expressed in the same units of account.)

See also Edwin Cannan: *Money*, 1935, Part I, Chapter II, Sections 2 and 3, also F. W. Taussig: *Principles of Economics*, 1927, Chapter XIX, Section 4.

Reference to the Black Death may be found in countless historical works: it is common to find scarcity of labour

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given as the reason for the rise of wages, if not for the rise of prices in general; sometimes the case is stated ambiguously; quite frequently, the volume of money in relation to population can be perceived only between the lines.

- (ii) Regarding paper issues in general, see Edwin Cannan: *Money*, 1935, Part I, Chapter IV, Section 3.

Concerning inflation by the authorities, see R. G. Hawtrey: *The Art of Central Banking*, 1932, Chapter IV (Title Essay), the section (in the latter part) entitled "Central Banks and Inflation". An earlier section in the same essay deals with inflation by joint-stock banks.

Regarding crises, see R. G. Hawtrey: *Currency and Credit*, 1923, Chapter II.

2. The above are relevant to this section as well. See, in addition, R. G. Hawtrey: *Currency and Credit*, 1923, Chapter VIII.

An example of the significance of the velocity of circulation in connection with prices is given by Lionel Robbins: *The Great Depression*, 1934, Chapter II, Section 4.

(The subject of this section—and the last one—is usually treated in well-known works only in the form of historical examples.)

3. See particularly the well-known account of the subject of this section in J. M. Keynes: *A Tract on Monetary Reform*, 1923, Chapters I and II. (Notice that Mr. Keynes gives simpler definitions to the terms inflation and deflation than those adopted in the first section of this chapter.)

A very short account is given in R. C. Mills and E. R. Walker: *Money*, 1936, Chapter III, Section 8.

Another short account is to be found in D. H. Robertson: *Money*, 1935, Chapter I, Sections 6 and 7.

CHAPTER XII

HISTORICAL EXAMPLES OF MONETARY FLUCTUATIONS

§I

The decline of Rome. The rise of Spain, the Netherlands, France and Great Britain in the sixteenth and seventeenth centuries. Assignats and mandats.

History textbooks are accustomed to devote considerable space to military details, to kings, emperors and persons holding administrative office, to inventions and discoveries, to the arts and religion; but large monetary movements are inclined to be overlooked, to the detriment of the balanced view. Often public finance does find inclusion—as an incidental connected with war.

The military agglomeration of the Roman Empire reached its zenith at the dawn of the Christian era, after a period wherein the supplies of the precious metals and their velocities of circulation had been increasing. It is doubtful whether stocks of bullion were actually falling during the long decline of the Western Empire, but it is certain that the rate of increase (if any) was slower than before. At the same time, commerce was severely handicapped by monetary debasement, which finally produced acute crisis in the third century A.D.; it is probable that the velocity of circulation was falling. And as the Dark Ages drew near, a tendency can be distinguished which we may describe as a change in liquidity-preference; a change, that is, from the creation of real wealth in the form of roads, buildings and so forth, to the sterile hoarding of bullion. We should be wrong to look upon these essentially monetary movements solely as effects of deeper causes; they

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were among the most potent forces which helped to set up and then to destroy the Roman Empire.

The retrogression of the Dark Ages and the scarcely perceptible progress of mediæval times eventually gave place to comparatively rapid changes during the sixteenth and seventeenth centuries. It is no coincidence that supplies of bullion, great in relation to existing stocks, were coming, during this period, from the New World. Spain was the first country to be affected, and she was the first to establish a fleeting hegemony over western Europe. The hope of great riches stimulated the foundation of a vast empire in Central and South America, a development accompanied by the merciless oppression of the local inhabitants.

Spain, like Midas, had reason to regret the gift of gold. With a government blindly attempting to prevent the dissemination abroad of her bullion, which they mistook for the vital form of wealth, Spain hastened the end of the profit inflation by engendering a rise of wages commensurate with the rise of prices. This process brought about a deflation of profits within two or three decades.

At the same time, the bullion found its way abroad, firstly to the Netherlands which, for this reason and on account of its geographical position, rapidly became the commercial centre of the world. Great banking houses arose, promoting investment in many parts of western Europe; the Dutch began to manifest an independence, born of prosperity, which the oppression of larger nations failed to conquer.

England, experiencing the first substantial rise of prices since the Black Death, put by her sombre mediæval attire, and emerged in the brilliant colours of the Tudor epoch. But, later, the monarchy failed to acquire a proportion of the new funds sufficient for the good governance of the country. The honest, simple squires of the early Stuart Parliaments, whom history books are inclined to uphold as models of uprightness contrasted with a lax and spendthrift court, were guilty of misunderstanding fatally the financial realities: the guilt of ignorance, perhaps, but an important cause, usually underrated, of the disastrous Civil War.

England's internal troubles enabled France to assume the leadership of Europe, with the great Louis XIV scarcely held in check by continental alliances formed around the House of

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Orange against him. While Cromwell ran the country as he pleased, imposing, through the major-generals, exactions such as Charles I had never dared to hope for, England's name had stood high in European affairs. Under Charles II came the increase in taxation made inevitable by the higher level of prices.

We must not suppose that the profit inflations, which gradually gave place in these countries to a general rise in all prices (including wages), were unmixed blessings. Spain, despite her empire, sank to the level of a second-rate power, possessing a peasantry living in depressed conditions. The common people of Holland lived very meagrely. France, where the few preserved the benefits to themselves, laid the foundations of the French Revolution. Even in England, during the allegedly spacious days of Queen Elizabeth, we find the problem of destitution appearing in an acute form.

The process of profit inflation is one of "polarisation", wherein a few enterprising people become richer, and the mass of the people become poorer. The historical examples of it, which we can quote, show a later reaction of an adverse sort. We may tend to the view, therefore, that monetary fluctuations are adverse to general progress, but this view must relate to the fortuitous, uncontrolled and uncomprehended movements of the past. Now we know what we are doing in monetary affairs, it may be different.

By way of contrast, we may look at the excesses of the French Revolution. The pre-revolutionary government had long been in the direst straits for money. The Assembly attempted, in 1789, to solve the inherited difficulties by an issue of bonds, termed assignats, bearing interest at 5%, and secured by the land taken in the name of the nation from the privileged classes; these bonds were to be cancelled as they were handed back to the government in exchange for land; and if a government creditor, to whom they were paid, did not want land, he could sell the bonds, it was thought, to someone else who did require it.

The first issue was for the amount of 400 million livres (25 livres = £1). In 1790, however, the rate of interest was reduced to 3%, but the assignats were made legal tender. Born as securities, they grew into money. They began to circulate, at a discount of 5%, which may be explained by the fact that

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they were in denominations too large for the purposes of ordinary business. A very considerable stimulation of enterprise resulted.

But the state's requirements could not be solved so simply. The limit to the total amount issued was raised in 1790 to 1,200 million livres. Gold and silver began to leave the country, or to find their way into secret hoards, but, at the same time, the real depreciation of the assignats began. Their number did not at first advance outrageously: another 600 millions were added in 1791; the value of the paper livre moved around three-quarters of the old livre. Early in 1792 came war, however, and considerable further issues: the value fell to little over half (partly by reason of speculation), but early military success and the determination of an extremist government brought the value back to three-quarters by the end of the year, despite a further issue of 500 million livres. The full account of the issues of assignats is better seen from the following table:¹

ASSIGNATS, 1790-1795

PERIODS.	Notes in millions of livres.		Percentage of value of old livre.	
	Issued.	In circulation.	By local tables.	By Treasury figures.
1790-1791	1860	1490	86	77
January-May 1792	2200	1660	72	58
June-December 1792	2750	2250	75	72
January-August 1793	4050	4050	39	22
September 1793-July 1794	8450	7200	41	34
August 1794-December 1795	*	19700	0.8	0.8

* Variously estimated from 29,000 to 45,500 million livres.

The violent issues of the later years were made at a time when the dislocation caused by the earlier issue was already having its worst effects: the real yield of taxation was negligible; unemployment had appeared, and therewith extreme misery on account of the soaring price-level; the aggregate

¹ Quoted by J. L. Laughlin: *Money, Credit and Prices*, 1931, Volume II, page 175 (S. E. Harris: *The Assignats*, 1930).

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value of the total paper issue was falling fast; and a large quantity of forgeries were in circulation.

The earliest issues of assignats, thought to be largely in the hands of Royalists, were repudiated. At the end of 1795, the government tried to levy a forced loan, in subscription to which assignats were to be accepted at 1% of the face value; that the current value was less than this is shown by the fact that no coin was subscribed to the loan. Assignats were also to be made exchangeable for mandats territoriaux at the rate of 30 livres assignat to 1 livre mandat. But mandats proper, which were to be certificates immediately exchangeable into land, were never issued. Instead, promesses de mandat were issued, but these, which differed in no essential from the assignats, were never passed freely in circulation: soon after their issue, they circulated with difficulty at about 5% of face value, and in 1797 were accepted by the government, in subscription to a loan, at 1%. In that year, too, the legal tender status was taken away from both paper issues, and a scale was prepared for the settlement of private debts according to the fraction of value remaining to the assignats and mandats at the time when the particular contract was made.

The whole misguided affair was a tragic example of inflation at its worst. The connection between the paper and land was very attenuated, for it was quite impossible within a short time to sell land on a large scale for bullion, else its value would have collapsed ruinously. The paper money was issued so fast that it never had a chance of being readily acceptable; so its value slumped, and it had to be issued all the faster. A progressive decline of this kind must become farcical within a short time.

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§ II

- (i) Great Britain's wartime inflation: certain figures. Normal wartime experience. Explaining away government inflation. Price control and rationing.
- (ii) Certain wartime figures for the United States, France and Germany. The effect on the value of gold; differing experiences; hyperinflation.
- (iii) Table of certain exchange rates and gold equivalents.

(i) Let us now summarise our consideration of Great Britain's wartime inflation by looking at the most important statistics:

CERTAIN STATISTICS OF GREAT BRITAIN, 1913-1924

Year.	Total notes in circulation. ¹		Deposits at joint-stock banks. ²		Wholesale price index. ³	Cost of living index. ⁴	Treasury Bills outstanding. ⁵ £000,000.
	£000,000.	Index.	£000,000.	Index.			
1913	30	100	800	100	100	—	—
1914	75	250	900	112	100	114	99
1915	138	460	1000	125	127	135	380
1916	190	633	1150	144	160	167	1116
1917	259	863	1360	170	206	190	1058
1918	394	1313	1590	199	227	220	1095
1919	446	1487	1880	235	242	225	1107
1920	481	1603	1970	246	295	269	1102
1921	433	1443	1980	247	182	199	1060
1922	405	1350	1820	227	154	180	719
1923	405	1350	1810	226	152	177	652
1924	396	1320	—	—	164	181	626

¹ J. L. Laughlin: *Money, Credit and Prices*, 1931, Vol. II, page 533.

² The same, page 531 (graph).

³ *Statist.*

⁴ Board of Trade: July 1914=100. Figures given refer to December.

⁵ Walter Leaf: *Banking*, 1935, pages 203/4. December figures.

We may observe several interesting points from these figures. The index of notes in circulation increased markedly more than the other indices; this is partly accounted for by the

use of notes instead of gold in circulation, and partly by the increase in the proportion of the national income passing to the poorer sections of the community, who use notes rather than bank accounts. This grossly inflated column of "Total notes in circulation" includes both Bank of England and Treasury currency notes. By an Act of 1928, these two issues were amalgamated in the hands of the central bank.

Until 1920, the wholesale price index stood slightly above the index of bank deposits, suggesting a fractionally increased velocity of circulation; with the coming of depression, deposits shrank little, while wholesale prices fell sharply, an indication of the normal greater sensitivity of the velocity of circulation.

The cost of living index at first surpasses the wholesale price index, suggesting a more than proportionate spending by poor people, an indication associated with labour shortage. The reversal of this relationship from 1917 to 1920 is interesting. The rise of prices naturally excited comment and disapproval; official propaganda (with slight truth) attributed the rise to a scarcity of commodities, and, later, to profiteering; the second excuse was quite unfounded, for it was the government's own financial policy which had created the profiteers by raising prices; but, partly because the animus against profiteers was so great, the government gradually introduced a system of maximum prices; this was exceedingly dangerous, for it threatened to cause a falling-off of supplies, since traders' profits were encroached upon; and it occasioned discontent because people were left with money which they could not spend as they wanted, since traders, bereft of the normal method of "protecting" their stocks, namely, of increasing prices, found their stocks of many important goods exhausted. To cure the former trouble, where necessaries were in question, the government adopted numerous devices, chief among which were propaganda and direct participation in economic affairs. To cure the unspendable money trouble, the government adopted rationing; from the public's point of view, this at least ensured that some should not get an inequitably large share of necessary and desirable goods which everyone was prepared to pay for if they could find them. If the government had had rationing in view all the time, the half-way house of maximum prices might be excusable and even praiseworthy; for, the dislocation, occasioned entirely, it appeared, in response to popular

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feeling, was a necessary prelude to the bitter pill of the ration card; the country would have accepted rationing with great reluctance if it had not seemed to offer the solution of other difficulties. Rationing was assuredly the best policy.

The big fall of the wholesale price index, to a level well below that of the cost of living from 1921 to 1924, clearly indicates the process of profit deflation.

It will be seen that the great expansion of treasury bills belongs to the early part of the War. The financing of the later years was effected by increased taxation to some extent, and by long-term borrowing, itself made possible by the enormous expansion of the bases of credit brought about by the increases in note-issue and in treasury bills outstanding. Aggregate national debt increased from about £650 millions early in 1914 to a peak figure of £7,830 millions in 1920.

(ii) Let us now take a few comparable figures for the United States, France and Germany:

Year.	UNITED STATES.			FRANCE.		GERMANY.	
	Total resources of banks. ¹ \$ millions.	Wholesale price index. ²	Cost of living index. ²	Net debt of U.S. government. ³ \$ millions.	Circ'l'tion, Milliards of francs.	Wholesale price index. ⁵	Note circulation, Milliards of marks. ⁶
1913	—	100	100	—	6	100	3
1914	—	98	103	—	10.5	102	5
1915	11887	101	105	—	13	140	7
1916	14227	127	118	—	17	188	8
1917	17038	177	142	1909	22.5	262	12
1918	24451	194	174	10924	31	339	22
1919	29856	206	199	24479	37.5	356	36
1920	33753	226	200	24331	38	509	69
1921	30936	147	174	23814	36.5	345	114
1922	31724	149	170	22996	37	327	1,280
1923	33795	154	173	22156	38	419	496,507,425,000
1924	35777	150	173	21178	41	489	—

¹ June 30th. *Encyclopaedia Britannica*, 14th Edn., Vol. IX, page 137.

² U.S. Bureau of Labour Statistics.

³ June 30th. *Enc. Brit.*, 14th Edn., Vol. XXII, page 744.

⁴ J. L. Laughlin: *Money, Credit and Prices*, 1931, Vol. II, page 565 (graph).

⁵ *Enc. Brit.*, 14th Edn., Vol. XVIII, page 474.

⁶ December figures. J. L. Laughlin: *Money, Credit and Prices*, 1931, Volume II, pages 598 and 599.

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From the figures of the United States, we observe an inflation of bank deposits similar to the British one; but there is one great difference between the monetary circumstances of the two countries during this period, namely, that the pound did and the dollar did not leave the gold standard. Gold was imported into the United States from belligerent countries in unprecedented quantities: from a figure of \$1,290 millions in 1913, her stocks had risen to \$2,658 millions at the end of the War, and they continued to increase rapidly, reaching \$4,090 millions in 1924. The effect of shipments on this scale was similar in tendency (though not in extent) to demonetisation of gold by the other leading countries: we may see the effect upon the purchasing power of gold from the two United States price indices quoted: by 1920, it was halved. We may also perceive the origin of the internal debt of the United States: practically all of it was a legacy of the War; a large amount more has been incurred, however, since the post-war period.

Whilst the general tendency of prices was downward in Great Britain after 1920, and steady in the United States, we may observe that the French price-level continued to rise again after a short period of post-war depression. The reason for this is indicated sufficiently in the column showing French circulation. In fact, her public debt, which had been 34 milliard francs in 1914, rose to 286 milliards in 1920; this was too great and she was forced to seek relief in continued inflation. When its purchasing power had been reduced by about four-fifths, she was able to stabilise the franc.

The extreme example of an excessive war burden may be seen in the case of Germany. Similar conditions prevailed in other defeated countries. Germany's 1914 debt was small, 5 milliard marks; by 1920, it was 220 milliard marks; this was nominally less than the French one at the pre-war rate of exchange, and much less at the current rates. But Germany was completely exhausted and impoverished by 1920, not only on paper, but in fact. She had no hope of meeting her internal debt, and no chance at all of paying reparation on the scale demanded. She fell back desperately upon the last resource of a bankrupt state, inflation. The figures of note-issue suffice to show the extent to which she took to economic drugs. Such a process is called hyperinflation. In the latter stages, as the mark ran away towards zero on the foreign

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exchange markets, business in general became intolerably difficult: prices were fixed either outright in foreign currencies, or in terms of marks calculated by converting a dollar price into marks at the foreign exchange rate of the moment; in particular, wages were fixed in this way. This farce could not go on for ever: finally, in 1924, a new reichsmark, equal to the old gold mark of pre-war days, was introduced, and the exchange equivalent was fixed at 1 billion depreciated paper marks to 1 reichsmark;¹ the latter was to be based on gold, a fact which imparted confidence; but it was the limitation of the new currency, not the gold, which gave it stability.

(iii) Subsequent to the War, countries old and new established the gold standard—only to abandon it again during the great depression. In conclusion, it will help us to understand the extent of the depreciations if we set out in a table the pre-war and post-war exchange rates of some of the leading countries, with columns added indicating the subsequent depreciation resulting from the great depression. (See opposite page.)

We can see from this table that only Great Britain and the United States, of the belligerent countries, did not devalue their currencies after the War; France, Italy and Belgium, however, having devalued drastically, were able to maintain the gold standard much longer than other countries in the depression. That is one way of looking at it; another way would be to say that their earlier experiences of inflation made people irrationally enamoured of the gold standard and thereby put off the political possibility of devaluation, a hurtful outcome since devaluation in the circumstances which these countries have experienced since 1931 would have been beneficial. Holland, it appears, is the country whose currency has depreciated least compared with the earlier dates, and Germany's has fallen most, of course, because all the later German figures quoted ought to be divided by a billion.

¹ The process was effected via the introduction of the rentenmark, but in essentials, the matter was as stated.

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EXCHANGE RATES OF SOME IMPORTANT COUNTRIES, AND INDICES OF GOLD VALUE, 1913, 1929 AND 1937

COUNTRY.	Method of quoting.	1913 [¶] rates.	Return to gold. [¶]	1929 [¶] rates.	Index of gold value, 1913=100.	Suspension of gold standard.	Rates of 1 January 1937. ^{**}	Index of gold value, 1929=100.
Great Britain	\$ to £	4.86 ³ ₂	1925	4.86 ³ ₂	100	September 1931	4.91 [*]	60
United States	\$ to £	4.86 ³ ₂	†	4.86 ³ ₂	100	March 1933	4.91	59
France [¶]	Fr to £	25.22 ³ ₁	1928	124.21	20	September 1936 [†]	{ 105.1 121.19 ^{*+†}	14
Germany	Mk to £	20.43	1924	20.43*	100*		{ 100 * 51.50 * [§]	100 *
Italy [¶]	La to £	25.22 ³ ₁	1927	92.46	27	October 1936	93.25	24 * [§]
Belgium	Fr to £	25.22 ³ ₁	1926	175 ¹¹	14	April 1935	59	16
Switzerland	Fr to £	25.22 ³ ₁	1927	25.22 ³ ₁	100	September 1936	145.65	10
Holland	Fl to £	12.10 ⁷	1925	12.10 ⁷	100	September 1936	21.37	71
Sweden	Kr to £	18.15 ⁹	1924	18.15 ⁹	100	September 1936	8.96 ¹	81
Denmark	Kr to £	18.15 ⁹	1928	18.15 ⁹	100	September 1931	19.40	56
Norway	Kr to £	18.15 ⁹	1928	18.15 ⁹	100	September 1931	22.40	49
							19.90	55

* Really one billionth of this figure, since paper marks were converted into new marks in the ratio 1,000,000,000,000:1.

† Not officially suspended.

‡ Official quotation.

§ Registered marks, which may be spent inside Germany but not exchanged for other currencies in the foreign exchange market.

¶ From the time of stabilisation, the official Belgian monetary unit became the belga, equal to 5 francs; thus 35 belgas were equal to £1.

** Par of exchange.

†† The United States never left the gold standard.

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BOOKS

1. See J. M. Keynes: *A Treatise on Money*, 1930, Volume II, Chapter XXX, Section 1.

A very good account of the assignats and mandats is given by R. G. Hawtrey: *Currency and Credit*, 1923, Chapter XV.

2. For an account of the attempt to conceal government inflation in Great Britain, see Edwin Cannan: *Money*, 1935, Part II, Section 5, and Part III, Sections 3 and 4.

The post-war adventures of the mark are described in detail by Hjalmar Schacht: *Die Stabilisierung der Mark*, 1927 (of which there is an English translation).

For detail relative to the foreign exchanges, see Gustav Cassel: *Money and the Foreign Exchanges after 1914*, 1922.

CHAPTER XIII

MONETARY INSTITUTIONS FURTHER EXAMINED

I. THE BANK OF ENGLAND

§I

The Bullionists. The return to gold and the outcry. The crises of 1825 and 1837-1839. The Banking School and the Currency School. The elasticity of credit obviating a fall in the price-level. The Act of 1844: issue and banking departments; the note-issue. The crisis of 1847: lender of last resort. Later crises and the development of Bank rate.

When the depreciation of the Bank of England's notes became serious during the Napoleonic Wars, public feeling, vented in parliament, required an investigation: bullion was being quoted at a premium and sterling had fallen on the foreign exchanges. In 1810, a parliamentary committee, the Bullion Committee, was set up. After taking evidence, it reported: that the Bank of England notes had indeed depreciated; that the excessive issue had turned foreign exchanges adverse; that the issue should therefore be restricted to raise its value; that the notes should become convertible again within two years; that it would be a breach of public faith to reduce the bullion content of the guinea so as to conform with the lower value currently attaching to notes.

The Bullion Committee took the view that the pound was equivalent to a piece of gold of specified weight and fineness, and, when its proposals were being debated in parliament, George Canning, who supported the proposals, poured scorn upon some tentative remarks made by Lord Castlereagh to the

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effect that the pound sterling was (in modern terms) a unit of account.

The parliamentary opposition to the report was very muddle-headed; nevertheless, resolutions put forward in the tenor of the report were rejected, and resolutions in the opposite sense, some of them patently foolish, were passed. The upshot of the matter was that cash payments were not to be resumed until six months after the end of hostilities.

The wisdom of the Bullionists has been praised widely, and it is true that they displayed a superior understanding of the monetary forces at work; yet it may be doubted whether a deflationary policy, of the intensity to restore the Bank's notes to face value in terms of bullion, would have proved helpful to the efficient conduct of the war.

At the end of the Napoleonic Wars^t, there occurred a spontaneous deflation: prices collapsed of themselves, without any strong restrictive measures on the part of the Bank. We may describe the process as an adverse change in liquidity-preference and a decline in the marginal efficiency of capital. The collapse, which included a fall of gold to the Mint price, enabled the Bank, and the country bankers too, to resume payment in gold. The people, however, preferred the notes, but, while this unforeseen development was troubling the bankers, there began, with happy irony, an external drain which compelled the Bank again to stop cash payments. This drain of gold resulted partly from the recovery after the slump (a reaction of liquidity-preference), greater in England than elsewhere, and partly from government borrowing at the central bank.

After another committee had studied the matter, the government began to repay debt on a large scale to the Bank, and this deflationary measure, accompanied by restrictive action on the part of the Bank, enabled cash payments to be resumed in 1821.

It was only after the resumption of convertibility that the opposition became vocal: the depression was undoubtedly severe and bankruptcy and misery prevalent, not in England only but throughout Europe. Distress meetings of farmers and debates of parliament availed nothing. The gold standard was getting set to score another century.

Some relief from depression, however, came swiftly: in

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1824 and 1825 there began a speculative boom which very rapidly reached its crisis. In the last months of 1825, prices in general fell, and, in particular, prices of securities collapsed. This rendered unsound the position of bankers who had lent on small margin; for, if the value of collateral accepted were 20% greater than the amount of the loan given on it, and the value of the collateral on the stock exchange fell by 30% to 50%, a banker's own position was undermined.

At first, the Bank refused to lend to those in difficulties, and the helpless ruin and misery resulting from that policy were remembered long. When matters reached a desperate condition, the Bank consulted the government, which declined to help. After that, however, the Bank began to lend freely. This change of policy saved the situation. But the crisis, due to overlending by the Bank and the country bankers, had brought down large numbers of banks and merchants.

In 1833, the Bank's charter was due for renewal, and certain changes were made: in particular, any rate of interest could be charged on three months bills, whereas 5% per annum had been the maximum permitted by the law of usury before that date. The succeeding years were marked by renewed investment on a large scale and of a somewhat speculative nature. In 1836, there were large exportations of gold to the United States and Ireland due to internal events in those countries. In 1837, a panic was averted by courageous lending on the part of the Bank. There was another factor, however, which helped to ease the situation, namely, excessive expansion abroad, which brought gold to England. Deflation came suddenly on the continent, and the drain of bullion which it occasioned from England was increased by unusually large imports of corn made necessary by crop failure. All this time, the Bank was gaily maintaining a low rate of discount, actually lower than the rate in the money market, whose members therefore brought bills to it for discount. The gold reserve shrank and shrank; finally, when the situation was almost desperate, the help of the Banque de France was secured, and this carried the Bank through the crisis.

The manner in which credit was regulated was clearly unsatisfactory; the proper principles and methods to be employed became the subject of discussion and controversy, which crystallised, within a few years, into two divergent theses.

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The Currency School, which expressed itself first and was the more influential, maintained that gold was the proper medium of currency; notes there might be, but their volume should vary strictly with the amount of gold possessed by the Bank.

In opposition to this view, the Banking School held that sufficient notes should be available for the needs of business; that over-issue was impossible since notes were only lent and would return to the issuing bank if an excess did manage for a while to get into circulation (the theory of the reflux). In addition, the writers of the Banking School (truly) perceived that unusually large issues were required at certain seasons of the year.

The weakness of the Banking argument lay in the fact that the reflux, when it occurred, might, in fact, be of a large order, arising from great over-issue long undetected, and bring about crisis, panic, and perhaps the suspension of convertibility into gold.

The weakness of the Currency School was the assumption, unconsciously made, that the volume of gold would be adequate for business needs; that is, they did not perceive that a disastrous fall of prices might result from the adoption of their principle.

This disastrous fall of prices did not occur, but this was due to the development of banking, i.e. the growth of deposit money. If they had been correct in supposing that prices were related to the quantity of currency, a mistake which arose from defining money as currency, then disastrous deflation would have resulted from the Bank Act of 1844.

This Act, enshrining the Currency School theory, split the Bank into two separate departments. The banking department was to carry on ordinary banking business. The issue department was to be a wholly automatic mechanism: its assets were to consist of £14,000,000 worth of government securities (which did not, indeed, accord with the strictest Currency School doctrine) and of gold in coin¹ or bars; the note-issue constituted its liability. The part of the issue backed by securities became known as the Fiduciary Issue. Except for this, therefore, Bank of England notes became gold certificates.

But there were also the note-issues of the country banks; these were dealt with as follows: their maximum issue was

¹ Some Silver coin was permitted, but was never important.

never to exceed the average circulating early in 1844; if a banker failed, his right of note-issue became forfeit, as it did also if amalgamation raised the number of partners to more than six. Thus, there were to be no new country issues and the existing ones were to lapse. The Act permitted the Fiduciary Issue of the Bank to be raised by two-thirds of the amount of a country issue when the latter lapsed. By 1921, when the last country issue lapsed, the Fiduciary Issue had risen, for this reason, to £19,750,000, an increase of only five and three-quarter millions. Finally, the Act provided for the weekly publication of the Bank return, a statement like an abridged balance-sheet.

The Act did not work as expected. By 1846, there was a boom of the usual pattern, with crisis hard upon its heels. The Bank, responsible in that its excessively low Bank rate had permitted an inflationary position to develop, thereupon refused to lend. Finally, the government was persuaded to promise an Act of Indemnity for the Bank if the fiduciary limit were exceeded. At once the Bank began to discount freely, and the crisis passed without the legal limit being exceeded—a clear indication that deposits at the Bank were the sort of money required.

Another crisis of a severe nature occurred in 1857: again the letter was sent promising an Act of Indemnity, which was actually passed since the limit was exceeded on this occasion. There was one significant difference, however, between this and earlier crises, namely, that the Bank did not try to restrict its lending. It had come to recognise that its unique position required unstinted lending in a crisis; that it must be, as Mr. Hawtrey has phrased it, the lender of last resort.

After the crisis of 1847, the Bank had perceived the necessity of high Bank rate in times of emergency; after the crisis of 1857, it saw that high Bank rate must be used to prevent emergencies from developing. For, if the schedule of the marginal efficiency of capital is greatly above the schedule of interest rates, inflated profits result, and these threaten general, cumulative inflation. The Bank raises Bank rate at a time when the market is discounting bills with it; since brokers, unable to borrow elsewhere, will make a loss if they have to take bills to it which they have themselves discounted at a lower rate, they raise their own rates accordingly; with a given

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schedule of liquidity-preference, such an advance in the short-term market attracts funds from elsewhere; that is, holders of longer term securities sell them and invest on shorter term; but such sales of longer term assets depress their value, which is the same thing as increasing the rate of interest on them. Thus, the general advance in interest rates, occasioned by an increase in Bank rate, reduces prospective profits from an inflationary level.

After another crisis in 1866, the Bank established the working principle that Bank rate should normally stand above, and not at the same figure as, the market rate for three months bills, a change which strengthened its power of control. The only subsequent crisis before the Great War was a minor one in 1890; this was surmounted successfully by prompt and adequate lending on the part of the Bank.

§II

The Bank of England return: the proportion and the ratio; the profits of the Bank.

Let us now take the Bank return for the beginning of February 1937:

BANK OF ENGLAND

RETURN FOR WEEK ENDED WEDNESDAY FEBRUARY 3, 1937

ISSUE DEPARTMENT

	£		£
Notes Issued:			
In Circulation	457,311,181	Government Debt	11,015,100
In Banking Department	56,349,479	Other Government Securities	187,879,503
		Other Securities	1,091,347
		Silver Coin	14,050
			<hr/>
		Amount of Fiduciary Issue	200,000,000
		Gold Coin and Bullion	313,660,660
	<hr/>		<hr/>
	£513,660,660		£513,660,660

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BANKING DEPARTMENT

	£		£
Proprietors' Capital	14,553,000	Government Securities	80,449,242
Rest	3,607,319	Other Securities:	
Public Deposits ¹	12,214,103	Discounts and	
Other Deposits:		Advances £8,520,709	
Bankers	£96,105,653	Securities £18,927,669	
Other			27,448,378
Accounts £38,273,601	<u>134,379,254.</u>	Notes	• 56,349,479
		Gold and Silver Coin	506,577
			<u>£164,753,676</u>
			<u>£164,753,676</u>

Notes, now as formerly, constitute the sole liabilities of the issue department: over £450 millions are in circulation, or about £12 per head of population (of England and Wales). This, for notes alone, not coin, seems very high, for few people carry such an amount about in their pockets; indeed, when we consider that about one-third of the population is under sixteen years of age, probably not (continuously) possessing an average of more than one note per thousand persons,² then £12 per head seems astounding. But we must remember that considerable quantities of Bank of England notes must find their way into Scotland³ and Northern Ireland³ and even into the Irish Free State, although these countries all have separate issues; furthermore, that the amounts of English notes held abroad by foreign exchange dealers must amount, in the aggregate, to a large figure; that practically every firm, including retail shopkeepers, has its own stock of till-money or petty cash; and, finally, that the London clearing banks alone possess about £130 millions. Even so, the £457 millions in circulation seems a somewhat large amount.

The rest of the notes, some £56 millions, forms the note reserve of the other department of the Bank; such notes are available for anyone who can draw a cheque (in his own favour, a "pay self" cheque) on the Bank.

The first of the assets of the issue department is described as "Government Debt": this amount was lent by the Bank

¹ Including Exchequer, Savings Banks, Commissioners of National Debt, and Dividend Accounts.

² The stock of notes held by the young would be greater at Christmas, but not vastly so.

³ Bank of England notes are legal tender there.

in its early days to the government, and has not altered since 1844. These 11 millions are included among the assets balancing the Fiduciary Issue, which now stands at the figure of £200 millions;¹ the bulk of these assets, however, are "Other Government Securities", that is, borrowings by the government for which scrip is issued (there being only a book entry as evidence of the "Government Debt").² "Other Securities" are first-class commercial bills. "Silver Coin" is never a large item, and may not, by law, exceed £5,500,000.

In the issue department, there remains the item, "Gold Coin and Bullion", amounting to roughly £314 millions—apparently. But herein lies a pitfall. The Act suspending the gold standard in 1931 repealed only the clause requiring the Bank to sell gold at the statutory price; its buying price remained at the statutory figure, equivalent to just under 85/- per fine ounce. It does not sound as if this were important, for people would hardly sell to the Bank at this figure, because gold, since 1931, has gradually risen to 141/11 (3 February 1937); nevertheless, there is one agent who does sell to the Bank, namely the Exchange Equalisation Fund. The Bank buys at 85/- and values its gold at that figure. Thus, the *current* value of those £313 millions odd, shown in the return, was over £520 millions on 3 February.

Now let us turn to the banking department: on the liabilities side, there is firstly £14½ millions of capital; this is ordinary stock held by the public (paying, incidentally, a dividend of 12%). "Rest" consists of a reserve of undistributed profits (which belongs, of course, to the proprietors). It is, however, by no means all the reserve of the Bank. "Rest" rises towards £4 millions as the half-yearly dividend payment approaches; and falls to just over £3 millions when the dividend is paid; it never falls below £3 millions.

The statement tells us what constitutes the "Public Deposits". Of the "Other Deposits", the bulk, nearly £100 millions, belongs to the member banks, who, as we have observed, rank their Bank of England deposits as "cash", and use them to settle the daily balances at the clearing. The "Other Accounts" mostly belong to other members of the

¹ In the next section, we discuss the fluctuations of the Fiduciary Issue.

² "Other Government Securities" apparently consist largely, or perhaps wholly, of short-term paper.

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money market, particularly to old established firms.

On none of its deposits does the Bank pay any interest.

On the assets side of the banking department, we find more "Government Securities", like those in the issue department; this entry includes "Ways and Means Advances" (if any), which are borrowings by the treasury of funds lodged by the government departments at the Bank, and also "Deficiency Bills" (if any) which are borrowings by the treasury from the Bank for the purpose of paying interest on the national debt; both of these borrowings by the treasury have to be repaid within specified times.

Of the "Other Securities", the "Discounts and Advances" are those in favour of the money market, but these do not include any money made available to the member banks, who never borrow at the central institution. "Securities" cover certain other investments (not government securities), including shares in the Bank for International Settlements.¹

The small item, "Gold and Silver Coin", is used for day to day requirements; all the rest of the gold is lodged in the issue department, which issues notes to the full (nominal) amount of this gold plus the Fiduciary Issue; that part of the note-issue not in circulation, in February 1937 some £56 millions, constitutes the reserve of the banking department; this is the margin kept in hand by the Bank for the currency needs of the country; it drops noticeably at Christmas-time.

If we add together these last two items, the notes and coin of the banking department, and divide the sum by the aggregate of all deposits, we obtain a figure of 38.8%. This percentage, showing the reserve position, is known as "the proportion"; it varies widely; but it is not now very significant, for, if the Fiduciary Issue were raised by a quarter, the additional notes issued would go to the banking department, and the proportion would be nearly doubled.

If we add up all the outside liabilities of the Bank, that is, the notes in circulation and all the deposits, and calculate the relation which the gold stock bears to this sum, we get a figure of 52.1%. This is called "the ratio". This figure also fluctuates considerably, though it used to be somewhat steady before 1931. A reserve ratio of over half looks very sound and healthy, but, as we saw, these gold stocks are really under-

¹ See Chapter XV, Section 3.

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valued grossly, so that the true ratio is 87%, a very fat figure.

The profits of the issue department all go to the government. As a slight compensation, a much smaller figure is paid to the Bank by the government for the management of the national debt and the numerous other government accounts.

§ III

The fiduciary limit to the note-issue. The proportional method.

The maximum issue method. The changes in the Fiduciary Issue: gradual, and 1928, 1931, 1933 and 1936.

We have seen that in England there is a twofold limit to the note-issue: the amount of gold held by the Bank and the Fiduciary Issue. When the old gold standard existed, the amount of gold was regulated by the value of sterling on the foreign exchanges: if sterling went too high, past the gold import point, gold came to the Bank, and the amount of notes increased accordingly; if sterling was too low, gold left the country, so contracting the note-issue. The Bank kept control of the situation by Bank rate changes and by the use of other devices which reflected upon the exchanges. The Fiduciary Issue was usually considered to be rigidly fixed, so that the movements of gold were the only customary agents for altering the volume of notes; whatever else might happen, England had to "keep in line", that is, her currency had not to alter in value in terms of the other countries'.

A different method of monetary control is the proportional method, which has two forms: the simpler form requires a proportion, usually 30%–40%, to be kept in gold against the note-issue; the second form, more suitable for advanced countries, requires a similar proportion of gold to be kept against both the notes and the deposits of the central bank. The deposits in question belong to the member banks and commonly constitute the bulk of the central bank's deposits. The second form is the more sensible one for countries wherein the deposits of the member banks at the central institution act, equally with notes, as the basis of credit. The 30%–40% reserve is not usually a minimum which must never be encroached upon, but a figure which the *average* monthly hold-

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ing of gold must equal or exceed; that is, if the central bank of a country, bound by law to maintain a reserve ratio of 30%, found that, despite its efforts to restrict credit, its reserve stood obstinately at 20% for the first fortnight of a month, it would be compelled to average 40% for the second fortnight, so as to produce the statutory 30% for the whole month.

Sometimes a tax, payable by the central bank out of its profits, is imposed upon any excess of note-issue, but this device has never been particularly effective, largely because the amount of the tax has never been enough to deter such a great financial power as a central bank. If a very high tax of this sort were imposed, the central bank might be heavily penalised for pursuing a wise and proper policy.

It is argued in support of the proportional system that it makes for great elasticity; if £20 millions comes to the central bank, the bases of credit can be expanded by about £60 millions, and the whole credit structure by a considerable multiple of this amount, perhaps by £600 millions. This is a poor argument. Most authorities no longer hold that large changes in the credit structure should result from relatively small gold movements; we have seen that the most important criterion for monetary policy is the volume of employment. In any case, the elasticity has to work both ways: a loss of £20 millions of gold would have to cause a very considerable contraction of credit, perhaps even a crisis and a panic; there is certainly no occasion to cause an unpleasant major movement of this sort on account of minor gold shipments; that would be, not the gold standard, but gold mania.

The only way of obviating a considerable contraction of credit when gold leaves a country practising a proportional reserve system is to keep a large stock of excess reserves; then the statutory 30%-40% becomes an "inedible iron ration"; it has to be there; it may not be used; it might just as well not exist—altogether rather a silly business.

A third method of controlling the note-issue is to fix a maximum figure beyond which issue is illegal. The amount of gold kept is left to the discretion of the central bank. Perhaps this is the best method known. It was used in France before the War, but it was somewhat farcical in operation, because, as soon as the actual circulation approached the maximum figure, the limit would be raised. Yet this is not

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entirely farcical: it enabled the government to review the policy of the Banque de France from time to time, and if the policy of the Banque had been at fault in requiring the limit to be raised, no doubt the government would have refused the increase, or, at least, threatened a refusal in order to assure future caution on the part of the Banque.

The Macmillan Committee, appointed before the recent depression became really intense to study means of bettering the financial apparatus of England, lent its great and varied authority in support of the maximum figure method of limit. England, however, keeps to the Fiduciary Issue system, and, although the "proper" gold standard no longer obtains, inward gold movements since 1931 have greatly increased the note-issue. To the extent that England has a favourable balance of payments, there is a balance of foreign money left in English hands; this may arise, we must remember, from flights of short-term capital, and not only from increases of exports and similar desirable events. The Exchange Equalisation Fund buys these foreign balances to stop the pound going up on the exchanges; but it does not like holding too much foreign money, so it exchanges the unwanted excess for gold. This process was quite easy while France and other countries were on the gold bullion standard, and, since September 1936, apparently it can still be done, because the agreement contracted at that time made provision for this operation.

But the English Fund has, from time to time, accumulated too much gold in this way, wherefore some has been sold to the Bank. At the end of September 1931, the Bank's gold stock was just over £136 millions; now it is nearly £314 millions. This increase, indeed, is so great that the Fiduciary Issue has been lowered to offset it. Let us look a little more closely at the fluctuations of the Fiduciary Issue.

In 1844, the fiduciary limit was fixed at £14 millions; by 1921, it had gradually risen to £19 $\frac{3}{4}$ millions, but, by that time, there was in circulation the far greater mass of currency notes issued by the Treasury. In 1928, when the issues were amalgamated, the fiduciary limit was raised to £260 millions. The Act in question contained a provision for raising the limit on the temporary authority of the Treasury, subject to parliamentary approval. But no use of this power was made until August 1931, when the fiduciary limit was raised to £275

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millions. This was a crisis measure designed to release some of the gold held as cover for the note-issue—to make a little of the iron ration edible; its effect was abortive in that it increased apprehension and stimulated sales of sterling. At the end of March 1933, after the Bank had acquired some £50 millions of gold from the Exchange Fund, the fiduciary limit was reduced to the old figure of £260 millions. There it remained until 16 December, 1936, when it was reduced to £200 millions. On that date, the Account sold to the Bank £65 millions of gold: if the Fiduciary Issue had been left at £260 millions, the amount of notes in the banking department would have risen to approximately £100 millions. Such a very large figure would have had an undesirable psychological effect, for it would have suggested that the Bank could perfectly well expand credit swiftly by a large margin. Such a feeling would have stimulated speculation in anticipation of a rise of prices. At that time, reflation was proceeding quite fast enough, and the danger of cumulative inflation was all too evident. The too ardent enthusiasts of recovery were suitably damped down by this reduction of the limit.

It is not clear from the Currency and Bank Notes Act of 1928 whether the Fiduciary Issue may be raised up again to £260 millions (or to something between that and the present figure) by Treasury action alone; on the contrary, it may be necessary to obtain retroactive parliamentary sanction for such a step, just as it is for an increase beyond £260 millions. The position is uncertain in this respect.

What is clear is that alterations of the fiduciary limit may figure prominently in the apparatus of monetary control in the future. Now, such changes will seem no more shocking than the arbitrary writing up or writing down of the value of gold stocks.

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§IV

Foreign central banks:

- (i) *France;*
- (ii) *Germany;*
- (iii) *The United States.*

The Bank of England was set up as a large monopolistic firm to make profits; it grew into a central bank because its governors accepted, with some reluctance, the responsibility attaching to monetary power. Other central banks have been created consciously for the purpose of controlling the monetary system of a country.

(i) The Banque de France was set up in 1800, that is, within a few years of the assignats and mandats fiasco. Like the Bank of England, its capital is held by the public, but the appointment of the board of directors is made by the two hundred largest shareholders of French nationality; French politicians of the left sometimes assert that the "two hundred families" misuse their power for political ends. The governor of the Banque is appointed, however, by the President of the Republic, that is, in fact, by the French government. This is different from England where the governor is appointed by the general court of governors (the directors), who, in turn, are nominally appointed by the stockholders, but actually by co-option, since no stockholder would think of opposing any name put forward by the existing directors.

The Banque performs discount business and makes advances, in a manner similar to the Bank of England; in addition, it is habitually a large scale lender to the government on account of the chronic budgetary difficulties. Through the French Exchange Fund, it controls the exchange rates, and it also resembles the Bank of England in being the sole note-issuing authority and in allowing no interest on deposits. The Banque de France traditionally kept a much larger gold reserve than the Bank of England did, both absolutely and in relation to its notes and deposits. This proportion used to be

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about 70% to 80%, but now it is only 55%; thus, the gold positions of the British and French central banks are roughly reversed at present.

(ii) As part of her monetary reforms, Germany set up the Reichsbank, in 1875, to act as the central organ of monetary regulation. Theoretically, it is entirely under government control.¹ It issues the notes, and is not supposed to give interest on deposits; these, in any case, are so small that they can be neglected. The Reichsbank's gold reserve is minute, at present equivalent to only about 1½% of the note circulation. Its main assets are bills discounted; it is supposed to make only small advances to the government, but, in fact, some part of the bills discounted are government "work-creation" bills, so that it is really lending large sums to the government; it is not known how great the holding of work-creation bills is.

Partly as a result of the public's abiding terror of inflation, born in the post-war years, Germany preserves a threadbare semblance of the gold standard. This official over-valuation of the mark is naturally accompanied by a shortage of foreign exchange. If the exchange market were left free, there would be a stampede of persons, German and foreign, to sell marks, so causing the mark to fall rapidly. Actually, however, an ingenious form of control is exercised: marks are divided into two sorts, ordinary marks, worth about 12 to £1, and blocked marks of various species, worth about 50 to £1. The ordinary, free marks are very hard for a foreigner to obtain; if they could be got, they could be sold in the exchange market at about 12 to £1, or (theoretically, at least) taken to the Reichsbank and exchanged for gold at the old, pre-war rate. Actually, the foreigner gets some sort of registered marks which can

¹ Actually, the position is by no means simple: Dr. Hjalmar Schacht, governor of the Reichsbank, is a very determined, resourceful banker. Governor during the post-war stabilisation, he was re-installed in office after the Nazi revolution. To some extent, he has his own ideas, and pursues them in the face of Nazi opposition; often he finds himself in alliance with the Reichswehr against the extremists. The Nazi government cannot afford to get rid of him, and while he remains he pursues his own policy whether or not it coincides with the government's wishes; his position does not seem to be so strong now as a few months ago; perhaps it is deteriorating seriously. Nevertheless, while Dr. Schacht remains governor, the Reichsbank will enjoy a certain freedom from government interference.

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only be spent or invested inside Germany; gold cannot be got for them at the Reichsbank.

(iii) The case of the United States is very complicated. Having suffered severe crises during the nineteenth century, this country set up, in 1913, the Federal Reserve System. This consists of twelve Reserve Banks located at:

- | | |
|------------------|--------------------|
| 1. Boston; | 7. Chicago; |
| 2. New York; | 8. St. Louis; |
| 3. Philadelphia; | 9. Minneapolis; |
| 4. Cleveland; | 10. Kansas City; |
| 5. Richmond; | 11. Dallas; |
| 6. Atlanta; | 12. San Francisco. |

Each of these is a local central bank, maintaining autonomous rates of interest, but subject to the co-ordinating authority of the Federal Reserve Board which resides at Washington.

The Federal Reserve Bank of New York was at one time markedly more important than the rest, but this has been less noticeable since the death (in 1928) of its vigorous and capable governor, Mr. Benjamin Strong; more power has passed to the Federal Reserve Board. And the Board is under government control.

The capital of the twelve Reserve Banks was subscribed (compulsorily) by the member banks, but by no means all the banks of the United States are, strictly speaking, members of the system; others work only subject to the laws of the separate states.

There are several kinds of notes in circulation: gold certificates and silver certificates (for which, however, bullion can be obtained no longer), notes issued by the government, those of the Federal Reserve System, and member bank notes.

The Treasury and the Federal Reserve Board manage the American Equalisation Fund between them, and thereby control the exchange rates. As always, the central banking system acts as the financial agent of the government. The American differs from the English system in that the Federal Reserve Banks' re-discount rates stand below the member banks' rates of discount; British Bank rate stands above the market rate. The member banks, however, do not promptly re-discount all the bills and promissory notes held by them for the sake of

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the profit arising from the margin between discount and rediscount rates. It is the understood thing that they shall not do so; and, for their part, they like to feel independent of the Reserve Banks. Member banks are compelled to keep deposits equal to a certain percentage of their liabilities at the Federal Reserve Banks, and, in order to assure their freedom of action, they like to keep very much more than the statutory proportions. Such excess reserves have been very high since the depression, and have caused fears that there would be nothing to prevent cumulative inflation once recovery began; it was felt that the member banks were in a position to lend almost unlimited amounts. To prevent this lending power generating inflation, the Federal Reserve System has made large inroads into the excess reserves by raising the percentages of compulsory reserves.

Since the War, the United States has been a veritable magnet for gold, and, although the volume of currency and Federal Reserve Bank deposits has grown enormously since the depression, the gold cover is now about 80%.

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CHAPTER XIV

MONETARY INSTITUTIONS FURTHER EXAMINED

II. THE JOINT-STOCK BANKS. THE CAPITAL MARKET

§I

The joint-stock banks: growth and amalgamation; joint-stock banking; limited liability. The clearing banks: distribution of assets and liabilities; window dressing; secret reserves.

The manner in which the "big five" English joint-stock banks were founded and have grown has been somewhat different in the individual cases.

The history of Barclays Bank begins as early as the seventeenth century with various private banks of issue, but the present institution really dates from only 1896, when some twenty private bankers, members of the Society of Friends and related by marriage, amalgamated their businesses in a single joint-stock enterprise. The early business of the bank was done largely in the eastern counties.

Lloyds Bank was formed from two private banks in Birmingham in 1865; one of these, Lloyds & Co., began business in 1765. The early business of Lloyds Bank derived from the western midlands, but its later steady growth has diversified its business throughout the country.

The Midland Bank was also founded at Birmingham, in the year 1836, as a joint-stock company. Its early growth centred particularly in the midlands and the northern counties. Fewer and larger amalgamations have marked its growth to the premier position among the joint-stock banks.

The National Provincial Bank has a dual origin, as a joint-

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stock bank issuing notes in Gloucester and elsewhere, dating from 1833, and as a London joint-stock bank without the right of issue, founded in 1839. These two parent banks were united as recently as the end of 1917, by which date they were both large organisations possessing many branches. The growth of the National Provincial by the process of absorption was rapid during, and immediately after, the War.

In origin, the Westminster Bank is almost entirely a London and home counties firm. Its present size is due to the amalgamation of large London firms rather than to the absorption of smaller undertakings. Two of the chief parent banks were founded in 1834 and 1836 respectively, and another one in 1865.

From the foregoing details, we can see the influence of the crisis of 1825. The failure of numbers of small note-issuing banks led to the passing, in the following year, of an Act permitting joint-stock banking outside the London area; this was followed up, in 1833, by permission for joint-stock banks to be set up in London, but without the right of note-issue. We ought to look upon this Act as causing the growth of the cheque-deposit system, and not regard the growth of the joint-stock banks as deriving from their practice of the superior cheque-deposit technique. These banks superseded the small, private, note-issuing ones by virtue of their greater size, wider spreading of risks, and better management. The technical system of cheque-deposits (admittedly superior in many respects) prevailed with the banks, rather than the banks with the technical system.

The legal safeguard of limited liability was not applicable to banks until 1858; before then, it was felt that depositors were not adequately guaranteed unless the whole of the private fortunes of the partners lay in the background as security for their deposits. The extension of this liability to shareholders in joint-stock banks was of questionable wisdom. This unlimited liability did not appear as a burning question, however, until twenty years after the passing of the Act. The firmly established banks seem to have thought that it would have been undignified, and perhaps damaging to their prestige, to re-register themselves as limited liability companies. In 1878, however, the City of Glasgow Bank foundered, a fraudulent wreck, and the shareholders were called upon for some 2,200%

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of the nominal value of their shares: absolute ruin was widespread in the west of Scotland. Thereupon bank shares became almost unsaleable, and the joint-stock banks in general had perforce to adopt limited liability.

Let us now examine the distribution of the assets and liabilities revealed in the monthly statement of the eleven London clearing banks:¹ the figures given are aggregates for the eleven banks, whose individual figures do not differ significantly from each other; the figures relate to January 1937, and are arrived at by averaging the weekly figures.

	(000's omitted).	% of whole.		(000's omitted).	% of whole.
Coin, bank notes and balances with the Bank of England	237,700	9.3	Capital paid up	77,286	3.0
Balances with and cheques in course of collection on other banks in Great Britain and Ireland	59,713	2.3	Reserve fund	57,786	2.3
Items in transit	4,469	0.2	Current, deposit and other accounts	2,307,210	90.3
Money at call and short notice	179,427	7.0	Acceptances, endorsements, etc.	110,575	4.3
Bills discounted	345,148	13.5	Notes in circulation	1,368	0.1
Investments	669,272	26.2	Reduction of bank premises account	280	—
Advances to customers and other accounts	880,021	34.4			
Liabilities of customers for acceptances, endorsements, etc.	110,575	4.3			
Bank premises account	44,634	1.7			
Investments in affiliated banks and subsidiary companies	23,546	0.9			
	2,554,505	100		2,554,505	100

On the side of the assets, cash works out as 9.3% of total liabilities or assets, or 10.3% of current, deposit and other accounts. The latter is the famous 10% ratio. But it is purposely misrepresentative: the real cash ratio is somewhat smaller than this, of the order of 9% of deposits; by "the

¹ *The Economist*, 13 February 1937, page 383.

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real cash ratio", we mean the *daily* cash ratio of the banks; the sum of £237,700,000 shown above is the average of cash held by the several banks on four (or five) particular days, one in each week, during the month; but the day of the week chosen by the different banks for making up their accounts is not the same day; on the contrary, some banks choose Wednesday, some Thursday and so forth; on the day they make up, they lend less than usual to the money market, so that they have more cash on that day than on others. The volume of resources in the money market does not vary widely on account of this, because, when one bank is calling in its loans, another is lending the extraordinary surplus of cash called in the day before. This extraordinary surplus of cash, which swells the ratio to 10%, is, then, a stage army, as Mr. Keynes has described it,¹ appearing again and again in the weekly figures of the banks. This silly and somewhat disreputable practice is known as window dressing. The true cash ratio moves around 9%.

Money at call and short notice is made up of funds lent to the money market. When the Bank of England decreases its liabilities, thereby depriving the joint-stock banks of some of their cash, they call funds from the money market; if the shortage of loans is acute, the money market has to borrow from the Bank—at Bank rate; the market, as the saying goes, is forced "into the Bank". Thus, money market discount rates are increased to the level of Bank rate, since the market cannot afford to make a loss by using funds borrowed at Bank rate for discounting at a lower figure. In this way, the decrease of its liabilities, effected through sales of securities, enables the Bank to make its rate of discount effective in the market. In fact, such sales of securities are often unnecessary; the knowledge of the Bank's power is usually enough to make its rate effective. This is the standard Bank rate technique, particularly adapted for contracting credit. When there is no need to contract credit (as there has not been during the last five years), Bank rate stands high and dry above the tides of market rate, and the market is never in the Bank. Actually, Bank rate has stood at 2% since 30 June 1952.

"Call money" usually stands at about 7%, which is considered from experience to be the ideal figure.

¹ J. M. Keynes: *A Treatise on Money*, 1930, Volume II, page 56.

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Bills discounted are composed of international trade bills, treasury bills, and a small volume of inland bills deriving from hire-purchase business; the clearing banks may, in the future, overcome their present caution in holding the last named; thus bills discounted may increase somewhat in the future, for this reason, and on account of an increase in the available volume of international trade bills. On the other hand, the present percentage is little below normal, and an increase in holdings of commercial bills may be made at the expense of reductions in treasury bill holdings.

Investments, at 26.2%, are much higher than the banks like; they would much prefer a figure of about 12% to 15%. On the other hand, they would prefer their advances to be much higher, of the order of 50%. Yet it will be somewhat difficult for them to decrease their investments: if growing recovery stimulates the demand for advances, gilt edged securities will be weak on the stock exchange because the public will be buying ordinary shares; if, therefore, the banks sell some of their gilt edged securities in order to be able to increase their advances, the gilt edged market will fall precipitously, so driving long-term interest rates upward. The banks would show a loss on the capital value of the securities remaining, which they naturally want to avoid doing. This difficulty may be solved by the Bank of England providing more cash so that the joint-stock banks can increase their advances without selling securities.

The liabilities of customers for acceptances, endorsements, etc., is a self-balancing item occurring also among the assets; it relates chiefly to foreign exchange operations.

On the side of liabilities, the reserve fund is a liability in the sense that it is the property of the banks' shareholders. The notes in circulation are practically all, notes of the National Bank circulating in Ireland. But all the liabilities are inconsiderable beside the current, deposit and other accounts. These have increased by about 25% since June 1932.

The banks' statements do not reveal their full strength. They possess hidden reserves, partly concealed among current deposit and *other* accounts. These have been amassed chiefly by valuing investment assets at purchase price, nominal value, or current value, whichever be the lowest; thus, what is entered in their balance-sheets as worth £100 may really be

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worth £120. The transfer of funds from one successful investment to another serves to conceal more and more. The writing-off as bad debts of sums later recovered from customers is also a way in which secret reserves have been built up. Another means to the same end is writing down the value of bank premises. It is known that these secret reserves are upon a very large scale, but naturally no figures are available.

§II

The small trader. Rates charged. Medium-term capital. Bankers' participation in industry. Long-term capital and the public.

The complaint is frequently heard that the banks fail to provide adequate credit facilities for small traders, but have more than enough funds available for large scale enterprises. The first comment to make in this connection is that the large scale enterprise usually can, and the small man frequently cannot, provide the bank with suitable collateral. The banks do not advertise the fact that some of their loans are made without collateral, but, in fact, they do give considerable sums as credit upon personal security only. No one should blame the banks for being cautious about lending to small men without collateral; the incidence of bankruptcy among small shopkeepers, for instance, is too great to permit much lending secured only upon the tradesman's honesty and ability; unhappily, too many honest, hard-working persons fail in retail trade and other small businesses..

If bank credit to small scale enterprise is to be extended greatly, it were better that some special institution were set up for the purpose; it would have to acquire a knowledge of local conditions and small firms' risks and prospects which is certainly beyond the scope of the present banking system; and it seems likely that the inquisitorial methods necessarily employed would rouse great hostility; for a small credits bank would have to find out not only about the business position, but also about the personal life of its prospective customers to an extent which would horrify existing bank managers. Granted all this, the rates charged by a small credits bank would be high

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because of the nature of the risks accepted, and because its expenses would be high.

Alternatively, it might be possible to dovetail a special credit institution with the system of suppliers granting credit to small undertakings: if the special bank provided the credit, and the suppliers of the small firms took at least a part of the risk, it might be possible to build up a useful organisation. But a big extension of credit by the existing banks in favour of the small entrepreneur should not be looked for.

A more valid criticism of the banks touches the rates of interest charged by them for advances. Rates seem particularly onerous in times of depression: when, for instance, Bank rate is 2%, the short-term rate in the money market $\frac{1}{2}\%$, and the rate allowed by the banks on deposit accounts also $\frac{1}{2}\%$, then a rate of 4%–5% on advances and overdrafts seems excessive. The banks' customary answer to this challenge is to show that their profits are made from a very small margin, which is quite true. But when the banks go on to assert that competition among themselves assures all the benefits possible for the public, both in respect of rates and in other ways, then they are falling into the trap inadvertently prepared for the unwary by economists of an earlier age. For, the competition which must reduce prices and so serve the public interest, is not that among a few semi-monopolists (which is what the banks are); competition among "oligopolists" *may* reduce prices; on the other hand, it may lead to wasteful expense and raise prices. Thus, when we observe each of the big banks spending large sums upon opening new branches, splendidly housed and equipped, in places where one bank (with perhaps double the staff) could perform, perfectly well, the business done by four or five branches, we may feel doubt as to whether this competition works out to the public benefit.

But if we feel that the banks' lending rates are excessively high, we must not overstate the position and allege that depression could always be cured by a lowering of rates. This is not so: while a process of deflation is going on, no practicable lowering of rates, even given the nationalisation of the banking system, could check and reverse the tide of business; other action is needed for that.

The lack of lending for medium terms, say one to five years, is another subject of complaint. The banks may certainly be

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criticised in this respect. No doubt it is perfectly true that such business is inappropriate for banks of deposit, whose assets must be of the most liquid kind consonant with reasonable profits. But the banks might have set up a subsidiary company to perform medium-term lending. In fact, it was left to the Bank of England to do this, through an offspring called the Bankers' Industrial Development Company. It is highly inappropriate that the central bank should have had to set up such a firm. As well, we find Bank of England support given to the Securities Management Trust, formed, in 1929, to investigate and advise on all financial, industrial and economic questions, but also holding securities on its own account; to the Lancashire Cotton Corporation, a large undertaking designed for the rationalisation of some of the cotton industry's wrecks and vessels in distress; to the United Dominions Trust, a firm, now grown to great size, performing hire-purchase finance and similar business; and to the National Shipbuilders' Security Company, designed to foster the shipbuilding industry, partly by actually acquiring yards.

We see the Bank taking an active, though not extensive, part in supporting British industry in certain vital directions. It is true that the Reichsbank and the Banque de France have, in former years, gone much farther along the same road; but it is still true that this is not the proper rôle for the central institution. The member banks of France and Germany are much more closely associated with industry than the English ones are; and industry in those countries has benefited very greatly from the connections; it led to excessive locking up of resources, which should have been kept liquid, in Germany, and no one will urge our joint-stock banks to tie up their fortunes with a particular industry. The fact remains, however, that the connection between industry and the banks could be strengthened with mutual advantage; and the most suitable link would seem to be subsidiary finance companies, prepared, if necessary, to support reasonable undertakings for periods as long as ten years.

Another aspect of the provision of capital is the manner in which the public is asked to subscribe long-term funds. There are variations in the technique employed, and some differentiation of function among those concerned with new issues: briefly, some firm issues the prospectus and a bank

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agrees to accept the subscriptions of the public to the shares. The important points, however, are these: the public is well protected from fraud and bad investment in the case of issues for countries overseas, because certain large and reputable firms concern themselves with foreign issues; the reputation of these firms depends upon the success of the issues sponsored by them, and the greatest care and skill are devoted to ensuring the soundness of the shares offered, and to fixing their subscription price equitably. No such protection for the investor exists in the case of issues for companies located within Great Britain. Such issues may be good or they may be poor, worth much less than the price given by the public; shares offered are sometimes "straightforward swindles", worthless. The firms issuing prospectuses may be sound or they may be frankly fraudulent. The details of a prospectus may be reliable estimates and representative figures, or they may be wildly optimistic guesses and irrelevant figures.

The public falls into the traps. As has been pointed out many times, the innocent investor sees the name of one of the big five in large letters on the prospectus: he imagines, in a vague sort of way, that the bank is associating itself with the issue; the prospectus must be good, he supposes, if a great bank is in it. In fact, however, the great bank does nothing at all except receive subscriptions for shares; it is in no way responsible for the issue.

It is clear that this state of affairs is unsatisfactory and must stop. But, of recent years, the volume of new issues has been so small that there has been insufficient scope for the establishment of large and reliable issue firms.¹ Now that boom conditions approach, it is to be feared that disreputable firms will reappear.

¹ One highly successful firm, Messrs. Philip Hill & Partners Ltd., was incorporated in 1932; apparently, issue business does not constitute the whole of its activities.

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§ III

Some technical details of capital transactions. Various ways of getting the public in: private issue, public issue, offers of sale, stock exchange introduction. The stock exchange, a second-hand capital market: the stock exchange committee; the account; bulls, bears, stags; contango, backwardation. Stock exchange speculation. Wall Street.

Looking more closely at the machinery for attracting permanent¹ (monetary) capital, we may distinguish four different devices employed. The first of these is private issue: it includes the cases wherein a firm is started with a man's own means, with money subscribed by a friend or by a syndicate of business men. This is the type of financing practised by small undertakings: for example, unit retail shops. Properly speaking, this method does not get *the public* in, but only a few acquaintances. Private issue accounts for a considerable proportion of all capital issues.

Another method is public issue, a process in which several firms participate. In the first place a promoter, who is often a single person, but sometimes a syndicate, decides to "float" a company; it may not be an entirely new enterprise, in the sense that it is floated to acquire one or more existing businesses (often private ones). The promoter plans the enterprise, fixes the amount of the capital, and usually applies to the authorities for the registration of the prospective enterprise. Then he arranges that some firm, preferably a well-known one, shall issue the prospectus. The promoter may be remunerated by a cash payment, by a block of shares in the business (usually ordinary shares), by a seat on the board, or by some combination of these. If he retains interest in the firm, he has some reason for trying to make it a success; but, in general, he is interested in seeing that the capital is as large as possible, since his remuneration bears some sort of relation to the amount of capital. The issuers, on the other hand, probably underwrite the issue, that is, agree to buy any shares the public does not subscribe for. Their interest, therefore, is to make the issue as

¹We say "permanent" so as to exclude consideration of temporary borrowing from banks or others,

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attractive as possible, so that the public will buy the whole thing, and they will not be left to buy any; for, on those shares they purchase, they may make a loss, since the shares will fall to a discount on the stock exchange, and the issuers have either to lock up their funds or else to sell shares at a loss. Thus the issuers ought to see that the public will get a reasonable and proper bargain for its money; unhappily, unreliable issuers may be content to make an issue, really a very poor investment, *appear* to be good. The issuing firm may be a substantial stockbroking house, or an old established merchant banker, or it may be a worthless company, set up solely for the purpose of making the issue.

It probably falls to the issuing house to ascertain whether the shares about to be issued will comply with the regulations of the stock exchange; if not, the terms of the intended issue will have to be changed, because the stock exchange deals only in those shares which comply with its regulations. The issuing house is almost certain to arrange sub-underwriting contracts; that is, that other firms shall subscribe for some of the shares which the public does not take. As mentioned in the last section, an arrangement is made with a bank that it shall accept subscriptions to shares from the public. Then the issue is made.

A third manner of attracting capital is by offers of sale. The chief difference between this method and the second one is that the issuers (usually an issuing house or a firm of brokers) buy all the shares of the new company and resell to the public by means of a prospectus. The legal requirements are now practically the same in these last two cases. The general feeling is that the commissions drawn by those making offers of sale, and, equally, those accruing to underwriters and sub-underwriters, and likewise the rewards of promoters, are all excessively high.¹

The last method is known as stock exchange introduction. It consists of nothing more than obtaining permission for the shares to be dealt in upon the stock exchange. This method is also called placing. A syndicate (or pool) is formed which either owns all the shares to start with, or buys them from the issuers. When leave to deal is obtained, the syndicate begins to unload the shares on the stock exchange, usually acting

¹ See *Economist*, 24 October 1936, pages 170-171.

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through a single firm of brokers (who are, perhaps, the issuers). The syndicate does not unload quickly, because that will send down the price of the shares, and therewith the pool's profits; on the contrary, they act cautiously, waiting for the public to come in and buy, watching the stock exchange price and slowly unloading the shares so as to maximise their profits (or, if the new firm is not a success, to minimise their losses).

A stock exchange is like a second-hand share market: it deals in old stocks and shares; these are to be preferred to new ones because investors, otherwise ill-informed, will be able to form a judgment of their worth from the prices quoted for them. A stock exchange comes near to being the "perfect market" of economic theory. The London stock exchange, much larger in every respect than the few exchanges existing in the provinces, has about four thousand members, each of whom may employ an authorised clerk to assist him in dealing; the members belong to a great number of separate firms, so that dealing is highly competitive. In addition, there are outside brokers, who are not members, but these are of less repute because some of their number have resorted occasionally to dishonest practices. The uniformity, durability and limited supply of the individual stocks and shares dealt in are other factors making for perfect market conditions.

Apart from a board, charged with the management of the buildings in Throgmorton Street, the (London) stock exchange is governed by a committee, whose rules and decisions are binding upon members. Both the board of managers and the committee are elected by and from the members.

Except for those relating to Empire governmental stocks, bargains on the stock exchange, like forward exchange dealings, are not paid for, nor the scrip delivered, at once. There is a special settlement, or account, day, which usually falls once a fortnight, generally on a Thursday; but the account stretches over three weeks when a public holiday comes within the period; thus, there are twenty-four accounts during the year.

Many people speculate on the stock exchange, some regularly, some occasionally. The system of fortnightly settlements facilitates speculation since a sale early in the account can be offset by a purchase later: in that case, the spectator never actually receives (nor delivers) the shares, and does not have to pay (nor receive payment) for them; he either pays or

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receives merely the difference between the purchase price and the sale price. A man who contracts to buy shares, hoping they will go up, and not meaning to hold them but to offset their cost with a later sale, is known as a bull. His opposite, who sells shares (which he often does not possess), hoping he will be able to buy them back more cheaply, is called a bear. Another animal is the stag, who applies for new issues, especially high-class ones, hoping that they will go to a premium before the issue is finished; he does not mean to hold the shares, although he may have to pay the first instalment of the issue price before he sells at a profit.

But it is possible, and indeed quite usual, to speculate for a period longer than the account: in such cases, the bargain must be carried over to the next account. If a bull finds that the shares which he has contracted to buy have failed to rise, he may "contango" them: this means that the bull's broker must virtually borrow money from a jobber (usually the one with whom the bargain was made); the borrowing rate includes a rate of interest per annum and the difference between the buying price and the price on contango day; the latter, which is called making-up price, is fixed by the clerk of the house (a stock exchange official), not by an individual jobber; contango day is the Monday before the Thursday settlement day (or the Friday before a Wednesday settlement); the first four days of the first week of an ordinary, fortnightly account are collectively known as the settlement (of the last account); they are simultaneously, the first four days, of the new account. When a bull's broker virtually borrows money from a jobber, he makes a double bargain, a sale of the shares for the old account at making-up price, and, offsetting this, a purchase at the same price for the new account.

If a bear wishes to carry over a transaction, because the shares have gone up, and not down as he expected, his broker arranges to borrow from the jobber, not money, but the shares: the broker buys them for the old account and sells them for the new one. The difference in price which the bear pays is called backwardation.

We should observe, before leaving this subject, that successful speculation on the stock exchange, like most speculation, consists in buying what the public and the market are buying, and selling what they are selling. For success, it is not always

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enough to behave wisely, buying stocks and shares which really do stand low compared with a reasonable capitalisation of their prospective yield, and selling those which stand too high. Indeed, speculation on sound, realistic lines may yield losses. It pays to be with, or rather before, the market: if the market is chasing worthless shares up to a great price, the successful speculator will be among the early buyers—and among the early sellers. On the whole, it is very unusual for shares to stand at prices either absurdly high or absurdly low. In a stock exchange boom, all ordinary shares stand somewhat too high, and in a slump they occasionally fall excessively low.

The New York stock exchange is notably more volatile than the London one. The absurdly high prices sometimes prevailing in the former do not reflect the actions of the professional dealers, of course, but those of the public. If a conviction of optimism spreads and increases among a hundred and twenty million people, such numbers may bull the market as to render prices fantastic. So it was in 1928 and 1929; after the boom burst, the prices of securities collapsed to levels much lower than those of similar securities in England.

BOOKS

1. See Walter Leaf: *Banking*, 1935, Chapters I and V. And E. A. Radice: Chapter IV, "Commercial Banks and Credit", Sections 1 and 2, in G. D. H. Cole's *What Everybody Wants to Know About Money*, 1933.

Concerning window dressing, see J. M. Keynes: *A Treatise on Money*, 1930, Volume II, Chapter XXV, Section 1, subsection 1, "England"; also the Report of the Committee on Finance and Industry (*The Macmillan Report*), Cmd. 3897, 1931, paragraphs 368-370.

For detailed history of the growth of one of the big five, see T. E. Gregory: *The Westminster Bank Through a Century*, 1936.

2. See the Report of the Committee on Finance and Industry (*The Macmillan Report*), Cmd. 3897, 1931, paragraphs 383-404; also Walter Leaf: *Banking*, 1935, Chapter VII.

For a typical complaint by a small trader, see the letter signed "A Disgusted Trader", in *The Economist* of 6 February 1937, page 303.

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3. See G. R. Mitchison: Chapter VI ("Capital and Investment") in G. D. H. Cole's *What Everybody Wants to Know About Money*, 1933.
- Also, Erich Roll: *About Money*, 1934, Part I, Chapter III.
Each of these two accounts is a work of high excellence.

CHAPTER XV

THE CONTROL OF MONEY

§I

The ultimate responsibility of the government. Treasury and central bank. The Bank of England: composition of the court of governors. Traditional secrecy in Bank policy: the reasons for it and the recent tendency of telling the market.

It is the government, of course, which is ultimately responsible for controlling the monetary system of its country. The government exercises control through its own monetary department, the Treasury; but Treasury control is not a simple, constant authority; for the Treasury is not peopled by experts in banking and international finance, but rather by taxation and revenue specialists. Thus, in practice, the larger aspects of the Treasury's financial policy derive from the advice given to it by the central bank. This is more especially true in the case of an old-established central bank of great prestige, like the Bank of England. Power, as ever, passes to those who can use it—in this instance, by reason of their special knowledge.

But perhaps it is true that Treasury control of the Bank of England is greater now than it was only a few years ago. Some say that the battle for the socialisation of the Bank is won already—by a Conservative government!—in substance, though not yet in form. It is very hard to pronounce with certainty upon such a question, for too much depends upon the personalities involved, and these change somewhat rapidly. The government has great powers:

1. over the volume of internal long-term issues;
2. over the effective short-term rate of interest by means of treasury bill policy;

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3. over the volume of external long-term lending;
4. over the whole money market in diverse ways by means of the Exchange Equalisation Fund.

The influence of the Bank, representing the City rather than business as a whole, is not, say some, what it was.

Some governments pursue a financial course of a somewhat independent nature, but, in general, any policy which a country's central bank regards as unworkable will not be attempted by a government. The position is more open if the government desires a policy which the central bank declares to be practicable but unwise: in such circumstances, the Bank of England would probably have its way; the Bank of Japan would probably not; and the Reichsbank would probably have to press its opinions in the strongest terms and then obtain only a part of the concessions sought. Clearly, the relationship between the Treasury and the central bank is a fluid one: a change of government or of the directing personnel at the central bank might alter profoundly the respective powers of the two authorities in any country.

It is interesting to observe, in view of the importance of the personal factor, the sources from which the Bank of England draws its governors. Before the joint-stock banks existed at all, the Bank was closely associated with the private bankers, the discount houses and certain great merchant firms. The governors were drawn from these, particularly from the ones possessing an international view on the subject of money. This seemed wise, because the Bank had necessarily to take a similar view; on the other hand, the Bank might be in danger of neglecting somewhat the internal results of its policy if its eyes were too rigidly fixed on external effects.

No one associated with a joint-stock bank is asked to join the court of governors. At first, no doubt, jealousy on the part of the private bankers was the principal reason for this practice; but there still remain two valid reasons, namely, that joint-stock bankers might take too domestic a view of the Bank's problems, and that they might see into each others' affairs to an unwarrantable extent, if granted seats in the court of governors.

In modern times, at least, the Bank has been too exclusive towards the joint-stock banks: it used not to make known to

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them its policy, a practice which may have been justifiable during the last century, but was certainly unwise after the War. This, too, arose from the jealousy of the private bankers, and continued for no good reason, the supposition apparently having been that the joint-stock banks could ascertain the Bank's policy sufficiently well from its actions.

During the War, and since, this policy has been reversed to a considerable extent. The Bank has drawn its directors from a wider sphere, now including outstanding men from the world of commerce and industry; and its intentions are made known to the money market in general. In 1931, the lack of information was still a matter of complaint among joint-stock bankers, but the Bank has, since, then, further modified its secretive attitude.¹

§II

Control by a central bank:

- (i) *Bank rate;*
- (ii) *Open market operations;*
- (iii) *Moral suasion;*
- (iv) *Exchange Funds;*
- (v) *Altering cash ratios;*
- (vi) *Taxing currency.*

There are some six different devices (as above) which a central bank may employ to control the monetary system of its country; we have described most of them already. The first two may be summarised together since they are usually operated together. A rise in Bank rate is frequently accompanied by a sale of securities on the part of the central bank, and a decrease of Bank rate by a purchase of securities. The phrase "open market operations" is commonly used to describe these transactions in securities whereby the amount of the

¹ On 26 January 1937, before the annual meeting of the shareholders of the Midland Bank, the Right Hon. Reginald McKenna (chairman of the bank) remarked: ". . . we have now a highly co-ordinated monetary system. The few great commercial banks work in harmony with the central bank, and all, in matters affecting trade and industry as a whole, act under such general directions as the Treasury may find it advisable to give." (See *The Economist*, 30 January 1937, page 258.)

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central bank's liabilities is altered. Since the War, open market operations conducted without changes in Bank rate have been quite common, to some extent replacing the older pre-war technique of Bank rate changes alone.

When the Bank of England puts up Bank rate and sells securities, two results tend to contract the volume of credit: firstly, the joint-stock banks, finding their cash at the Bank reduced, call loans from the money market, a process which disturbs the equilibrium of the market and leads to a higher price for borrowing, that is, higher market rates of interest; if the market is actually forced into the Bank, the market rates will advance right up to the level of Bank rate, itself now increased. The sympathetic rise in interest rates in conformity with a rise in Bank rate is nothing more than a process of anticipation on the part of the market, which is naturally aware that the Bank can insist on a higher level of rates by selling securities.

In the second place, there is the disturbance of the relationship between long-term and short-term interest rates: if short-term rates rise and long-term ones remain stable, short-term securities become more attractive to investors acting upon a constant schedule of liquidity-preference. Such persons are impelled to transfer their funds to shorter dated assets; the tendency to sell the longer dated ones drives down their capital value, which is the same thing as raising the longer interest rates. The effect is commonly reinforced because the schedule of liquidity-preference alters: seeing a rise in interest rates, investors fear a further increase and remove their funds from longer securities, whose capital value can fall far, to shorter securities whose capital value is kept high by the fact that the repayment of the full nominal amount will soon be made by the borrower.

The further effects of an increase in the whole schedule of interest rates derive from the altered relationship between this schedule and the schedule of the marginal efficiency of capital. Prospective profits shrink, and therewith the demand for credit: spending, production, employment and prices all proceed to lower levels than would have obtained if interest rates had not been raised by authoritarian action. If the schedule of the marginal efficiency of capital was greatly above the schedule of interest rates, the increase in the latter may still

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fail to bring the two schedules into an equilibrium relationship; in this case, a boom will develop. On the other hand, inflationary disequilibrium may be replaced by deflationary disequilibrium; then, the boom will give place to crisis.

Conversely, a lowering of Bank rate, accompanied by purchases of securities designed to provide the member banks with more cash, results in a lower schedule of interest rates, and thus enhances prospective profits. The improvement of the business outlook may still be insufficient to bring much relief from depression, or it may be enough to generate a powerful cumulative process which will reveal itself sooner or later as inflationary.

The perfection of Bank rate technique, associated with open market operations, belongs to the post-war period of stabilisation, when the gold standard obtained; we may therefore think of it as designed particularly for the maintenance of external equilibrium, as a device to keep up the value of the currency on the foreign exchanges (at the cost, in the case of Great Britain, of optimum internal equilibrium). A more subtle technique, also practised to this end, is commonly described as moral suasion on the part of the central bank. In the case of England, the moral suasion has particular reference to the rate and destination of investment. The Bank could, of course, ruin any firm performing new issue business. If one of the highly respected private banks, specialising in issue for overseas, determined to issue a large loan in face of the opposition of the Bank, the Bank could retaliate by raising interest rates vigorously. If the Bank's counter-measure were sufficiently swift in effect, the private bank would probably be left with the bulk of the issue on its hands; if the Bank's action took longer to make itself felt, the subscribers to the new loan would find that their bonds had fallen heavily almost as soon as purchased. A very few loans issued with either of these results would bring disaster to the private banker.

Indeed, it is probable that the Bank need only whisper about the money market that interest rates are likely to rise, and the news will travel rapidly, via the stock exchange to the public, interest rates will actually begin to rise and so spoil the prospects of the new issue. It is well to remember that the Bank possesses this power, for it does not appear in prac-

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tice. On the contrary, very intimate and agreeable relations exist between the Bank of England on the one hand, and, on the other hand, the private banks, discount houses and other long-established elements in the money market. It is from these firms that the governors of the Bank are drawn. When overseas issues are mooted, it is customary for the prospective issuer to obtain the blessing of the Bank or to decline to undertake the issue. No doubt there have been times when the Bank has given, so to speak, an all-clear signal, thereby permitting overseas issues to be made without specific reference to itself. But such conditions have not been characteristic of the post-war era. Since 1931, it appears to have been the Treasury rather than the Bank which has desired to throttle down the rate of investment.

The Bank's influence over internal issues is not so complete; at least, it is not perfect in times of great prosperity. But it is to be expected that the moral suasion will cover quite adequately this field as well, especially if the future brings forth the establishment of sound and reliable internal issue houses.

The purpose of the control of new issues is, as stated above, to influence the foreign exchanges. An issue in Great Britain for overseas entails a strong depressing force on sterling; the Bank was particularly anxious to avoid this, for instance, in early 1925, when the return to gold was imminent. Internal issues, by raising the economic temperature, so that employment, production and prices all tend to increase, have a similar but indirect influence on the exchanges. In 1932 there was an especial desire on the part of the Treasury to stop new issues: the authorities urgently desired low interest rates and a scarcity of securities in order to facilitate the great conversion operation which was carried out so successfully in that year.

It is clear that the virtue of controlling new issues does not derive solely from its influence on foreign exchange rates. It might be an effective weapon for use within a policy designed to curtail incipient boom conditions. With the recent trend towards co-ordination among our monetary institutions, perhaps something of this sort is to be expected. Indeed, moral suasion may become the instrument for controlling other components of monetary life besides the rates of investment.

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Moral suasion as such is not a reversible device: the Bank cannot talk the market into a state of prosperity. If we confine our attention to the rate of investment, however, and consider the ultimate monetary authority, then it is otherwise: investment is a stream whose level and pace can be regulated very efficiently by manipulating the flow of government capital expenditure.

For regulating the foreign exchanges, the Bank also possesses the Exchange Equalisation Account. This is a logical development. The old gold standard worked more or less happily: more so in times gone by, and less so latterly. It was essentially a rule-of-thumb system: gold went out, Bank rate went up; short-term balances came in, gold came in, Bank rate went down. The system worked according to the hard-and-fast nursery rules of correct behaviour suitable to monetary childhood. Monetary manhood is upon us now: latitude, discretion and judgment in the application of economic science, these are the operating forces of the new monetary system. Exchange Funds are part of the apparatus of flexibility: now that we are older, we are allowed to have cushions on our chairs.

Exchange Funds, whose resources can virtually be supplemented, in the case of Great Britain, by alterations of the Fiduciary Issue, constitute the ideal machinery for exchange control. If, after all, Exchange Funds were liquidated, and a return made to the old-type, rigid gold standard, many would feel that a step in the wrong direction had been taken; that such measures were retrogressive; and that time would bring another rigid gold standard fiasco, thereby showing the futility of trying to put the monetary clock back.

A further controlling device, having much the same effect as open market operations, may be used by central banks. We know that the joint-stock banks keep balances with the Bank of England; they do so voluntarily, usually holding sums equivalent to about 4% of their deposits in this form. If it were made legally binding upon them to keep a certain percentage of their deposits as reserves at the Bank; and the Bank were given power to alter this percentage at its discretion, then it would possess a very useful instrument of authority.¹ If the

¹ The Macmillan Committee, discussing this technique, urged the view that a statutory embodiment was unnecessary; that the Bank should

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amount of the banks' deposits at the Bank of England were increased compulsorily by 1%, they would have to contract their deposits by about 10%, and the various assets corresponding to these by a similar margin.¹ Thus the effect would be equivalent to that of an open market operation. But it would be superior, so it is claimed, since all parts of the credit structure, short- and long-term securities, bills, gilt edged, advances, etc., would all be affected by such a technique, whereas the effect of open market operations falls with disproportionate incidence upon short-term securities, since the Bank's transactions are limited by custom to this market. Whilst this is true, it may still be argued that the best method of all would be that the central bank should carry out open market operations on a broader scale, dealing in terms of securities of all lengths of life.

The alteration of cash ratios has been practised recently in the United States, not, indeed, with a view to altering the volume of credit at once, but in order to absorb member banks' excess reserves whose unfettered existence threatened inflation.

This device of altering reserve ratios may excite derision as being another example of an "inedible iron ration"; but it must be remembered that, if the ratios are increased when inflation threatens, they should be decreased in order to dispel depression. It must be admitted, however, that this instrument is more likely to be effective in curbing excessive credit expansion than in stimulating recovery, for, while depression reigns, it is borrowers, not the loanable resources, which are lacking.

Indeed, it is somewhat true of all central bank control that it is more efficacious in checking inflation than in curing deflation and depression. One device, however, has been invented, and practised tentatively, with the sole object of relieving slump conditions. This device is a tax upon currency:² every month (or every week) holders of currency can be required to affix to each of their notes a stamp equivalent to a certain percentage of the value of the note. It seems that quite a small represent to the joint-stock banks the cash percentage which it thought appropriate to the moment, on the understanding that the banks should alter their cash ratios in accordance with the views of the central institution. It does not really make very much difference. (See Report of Committee on Finance and Industry, 1931, §370.)

¹ Assuming that a compulsory raising of reserve deposits at the Bank of England were not offset by a decrease in their holding of currency.

² A proposal first put forward by Silvio Gesell.

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percentage (1% per month) is sufficient to produce the desired effect. The scheme cannot be extended to coins, but that does not spoil its efficacy; it could be adapted very easily to suit a monetary system, like the British one, in which cheque-deposits played the chief part. We may regard the results either as increasing the velocity of circulation, since people pay away their notes in order to avoid incurring the tax, or as a tax upon the extreme form of liquidity, the holding of currency. There is no loophole in the system, for it can be ordained that notes not stamped on the due date shall lose the whole of their value. The effect upon liquidity-preference appears to be so great that some people resort even to paying ordinary taxes in advance in order to avoid the currency impost. Finance ministers, fearful of war, might do well to keep the idea of such an effective measure in the back of their minds.

There is nothing intrinsically unsound about this instrument of control; it is certainly somewhat startling in its novelty, and it has been tried upon only a small scale (notably in the Austrian township of Wörgl in 1934). But it exists as a possible method of tapping the springs of enterprise in desperate circumstances.

§ III

International control: the co-operation agreement and the Bank for International Settlements.

It is clear that one national monetary system is closely related to others, through the foreign exchanges, international prices, movements of short-term funds and long-term investment. There are also the personal relations existing between directors of the different central banks, and, in addition, the co-operation agreement of September 1936 between Great Britain, France and the United States.

It is obvious that if countries pursue monetary policies designed to secure full employment, the foreign exchanges may vary, to the detriment of international lending anyhow, and probably of international trade also to some extent.¹ For

¹ Unless we may accept as a permanent state of affairs circumstances wherein Exchange Equalisation Funds maintain various currencies at fixed external values while their internal values diverge.

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national prices will be affected by the different rates of progress in production enjoyed by the various countries: if technological improvement is rapid in the United States and relatively slow in France, that will tend to increase the exports of the United States and to decrease those of France, a process tending to raise the dollar and to lower the franc. In addition, tariff changes will affect the strengths of different currencies in opposite directions.

The question which we have to consider is how the conflict between full employment and stable exchanges can best be treated. Since it is a supernational problem, it seems reasonable to consider the policy of some supernational authority, for it is not to be thought that other countries will resign the management of international monetary questions to any one particular national central bank. There was, indeed, a time, before the War, when the Bank of England almost attained to the position of an international central bank, but the peculiar circumstances leading to this somewhat anomalous state of affairs will never recur; on the contrary, the trend of events is entirely the other way: the central banks of leading countries are becoming more similar in the extent of their power and authority.

There exists, however, an institution which almost attains to the status of a supernational monetary authority. It is called the Bank for International Settlements (or, more shortly, the B.I.S.). The B.I.S. was not set up as an international authority; its origin was as follows. The reparation payments due from Germany under the Treaty of Versailles and the inter-allied debts contracted during the War presented the most formidable difficulties of transfer: the various governments managed, until the great depression, to collect the necessary sums from their nationals by taxation, or by borrowing; but, since the sums were due in foreign currencies, there was the additional problem of exchanging them into the payee's money; clearly, if the Treasury merely instructed the central bank to buy tens of millions of pounds worth of dollars on a particular day, the pre-existing exchange rates would alter enormously, naturally, care was taken to disturb the foreign exchange equilibrium as little as possible, but it presented a formidable difficulty which was much enhanced by exchange speculation.

The Young Committee, appointed in 1928 to make

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recommendations concerning German reparation obligations (by then admitted to be impossibly large), examined the transfer problem. Its report suggested the establishment of a special bank to assist with the problem: the B.I.S. was the outcome.

It was set up in May 1930 in Basle, a reasonably central and in every respect neutral place. Even at that time, however, there were people who hoped that the B.I.S. would grow into something bigger, resembling a supernational bank having the central banks as customers. Like the Léague of Nations, from which ultimately it derives its existence, the B.I.S. is really a piece of machinery rather than a separate authority; its directors are the nominees of central banks.¹ They can work the B.I.S. as national statesmen can work the League, well, badly or not at all.

Unfortunately the great depression brought a contraction, rather than an expansion, of B.I.S. activity. It was set up during the post-war period of stabilisation and its operations were limited to gold standard currencies. After September 1936, when the Gold Bloc fell, the B.I.S. continued to use the old, pre-devaluation gold Swiss franc as its unit of account. A scheme for its reorganisation will be presented to the next general assembly of the B.I.S. in May 1937. In the meanwhile, it appears to be transgressing its own statutes by dealing in depreciated currencies. By considering what its functions ought to be, we can infer incidentally the important alterations which ought to be made in its statutes.

The tasks which a reconstructed B.I.S. might perform would be of great importance. Firstly, the B.I.S. must be separated from the memory of reparations, if the German people is not to look upon it with hostility: the clauses in its statutes dealing with reparation payments should be omitted.²

Secondly, the management of the B.I.S. should be given considerable freedom of action, much more than if possesses at present, subject to only general supervisory powers on the

¹ Seven countries divide the control of the B.I.S., namely, Belgium, France, Germany, Great Britain, Italy, Japan, U.S.A.

² It has been suggested that a useful small change would be an alteration of the name; if "the World Bank", "the International Bank", "the Supernational Bank" or something of the sort were substituted, however, the new name might excite the distrust of autarchic nationalists and those fearing a "Money Trust".

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part of the directors, who should represent as many states as possible without being excessive in number.¹

B.I.S. notes might be used instead of gold as central bank reserves. It does not issue notes at present. Its liabilities should be notes and central bank deposits only, and its assets should be gold (deposited by central banks), treasury and commercial bills, and advances to central banks. There would probably be no need for it to hold either long-term assets or national currency balances. Its assets and liabilities in any particular currency should approximately balance, so far as possible, as at present, in order to obviate exchange risk.

The B.I.S., besides assisting in such business as the French loan of March 1937, could do much to harmonise the working of Exchange Funds. Perhaps it would be possible for all the Funds actually to operate from its offices in Basle. At least, it should make available its own notes in exchange for an excess of any particular currency accumulated by an individual Fund. Thus, it would be well if the central banks were normally indebted to it. Then, if the British Exchange Equalisation Account found itself accumulating an excess of French francs, for instance, it could exchange these for B.I.S. notes, which would have to be admitted as the customary currency among central banks; having acquired the francs, the B.I.S. would hand them over to the French Fund, at the same time adding an equivalent amount on to the figure of its advances to the Banque de France. Thus, the state of its borrowing from the B.I.S. would indicate to a central bank the tendency of the foreign exchanges. For instance, if France made a large loan to Poland, the actual effect on the exchanges could be offset by borrowing at the B.I.S.; if France became excessively expansive, the foreign exchanges could be supported by the same method. The important point to discern would be the reason for the increase in borrowing at the B.I.S. which automatically took place; the fluctuations of B.I.S. advances to individual central banks would themselves help to indicate the reason.

The B.I.S. could help to equalise interest rates throughout the world by open market operations and by the use of its own

¹ The central banks of South American countries, for instance, might elect one director from a list of names supplied by the governor of the B.I.S., the Secretary-General of the League of Nations or some other suitable authority.

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rate for advances. An exact equivalence is not to be looked for among interest rates (for loans of equal duration) in different countries. Whilst central banks should remain unaffected by the profitability of their operations, they should regard as anomalous, and as normally requiring correction, a state of affairs wherein they were lending at a rate lower than that at which they were borrowing from the B.I.S.

Above all, the B.I.S. might do invaluable service in cultivating a world outlook. It could act as a clearing-house for information and ideas as well as for national balances. As and when national devaluations became necessary, the B.I.S. might do much to facilitate an orderly transition to new exchange parities. If it could attain sufficient authority by its wisdom and sufficient independence from merely national interests, the decision whether to readjust a currency to lower (or higher) levels, and, if so, by how great a percentage, might be left to the B.I.S. Such power in the hands of the B.I.S. would constitute a surrender of national sovereignty on the part of the sovereign states members, and, in these days, the most optimistic internationalist despairs of such a possibility; yet, the further future, unless it holds the suicide of mankind, must contain the surrender of national sovereignty in matters affecting the general interest; and it is very possible that such a movement will begin in connection with matters not understood by the national publics, which are susceptible towards appeals to mass egotism and are therefore averse from surrendering the authority which politicians wield in their names.

BOOKS

1. See Report of Committee on Finance and Industry (*The Macmillan Report*), Cmd. 3897, 1931, paragraphs 371-374. Also Walter Leaf: *Banking*, 1935, pages 85-86.
2. Concerning Bank rate see J. M. Keynes: *A Treatise on Money*, 1930, Volume I, Chapter XIII; observe also a paragraph in J. M. Keynes: *The General Theory of Employment, Interest and Money*, 1936, page 339.

Regarding open market operations, see J. M. Keynes: *A Treatise on Money*, 1930, Volume II, Chapter XXXII, Section (v); and R. G. Hawtrey: *Trade Depression and the Way Out*, 1933, Chapter X.

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A discussion of both of these methods of control is contained in the Report of the Committee on Finance and Industry (*The Macmillan Report*), Cmd. 3897, 1931, Chapter IX; Sections 3-6.

Concerning moral suasion, see *The Macmillan Report*, paragraphs 362-364; also certain remarks by Hartley Withers: *The Meaning of Money*, 1932, pages 224-225.

For information about Exchange Equalisation Funds, see N. F. Hall: *The Exchange Equalisation Account*, 1935, especially Chapters III and VII.

For alterations of member bank cash ratios, see J. M. Keynes: *A Treatise on Money*, 1930, Volume II, Chapter XXXII, Section (vi), and *The Macmillan Report*, paragraph 370.

In connection with a tax on currency, see G. D. H. Cole: *What Everybody Wants to Know About Money*, 1933, pages 399-401 (in the chapter by H. T. N. Gaitskell).

3. See Paul Einzig: *The Bank for International Settlements*, 1930; also J. M. Keynes: *A Treatise on Money*, 1930, Volume II, Chapter XXXVIII.

CHAPTER XVI

MONETARY POLICY

§I

Various policies:

- (i) *Mercantilism;*
- (ii) *The rigid gold standard;*
- (iii) *Stable prices;*
- (iv) *The eradication of the trade cycle;*
- (v) *Neutral money;*
- (vi) *Stable incomes;*
- (vii) *Full employment.*

(i) The oldest monetary policy, of which we need to take note, is mercantilism. It is putting a broad interpretation upon the word, monetary, to describe a policy employing methods so diverse as those of mercantilism as monetary policy; but we shall use the term, monetary policy, in this wide sense, justifying our procedure by considering that strictly monetary methods play at least the largest part in a policy including other expedients.

The central objective of mercantilist policy was to maintain an adequate stock of money in the country. Adequate for what? Adequate to avoid deflation. We can state the matter more precisely and more impressively than the writers of the seventeenth and eighteenth centuries; we can see clearly what they were driving at. We can sympathise, indeed, with their desire to augment the country's stock of gold; it might have been wiser if they had sought to develop other sorts of means of payment, prudently managed as to quantity, but we should not deride their inability to foresee the future. The mercan-

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tilists knew only one method of safeguarding and increasing a country's stock of money, namely, a favourable balance of trade to secure an influx of gold.

Perhaps mercantilist doctrine must always lose sight to some extent of its objective in emphasising its method; as doctrine develops into dogma, it becomes irrational, fanatical and blind, overstating the virtues of its creed, and falling a prey to the heretical search for truth. So fell mercantilism before the logic of Adam Smith, who stole, by the strength of his reasoning, its mantle of orthodoxy. Yet, in the present age of many thoughts, mercantilism, disguised in modern dress, takes its place, albeit somewhat furtively.

(ii) It was upon the foundation of Adam Smith that the edifice of (rigid) gold standard philosophy was slowly built, although the rigid gold standard architects drew some of their inspiration, no doubt, from earlier thought. In that sense, perhaps, it is permissible to regard the maintenance of a rigid gold standard as the traditional monetary policy. In the present time, at least, it has all the trappings of tradition.

The rigid gold standard argument has had to divest itself covertly, under the hostile eyes of its critics, of the threadbare doctrine that the value of gold is stable; it remains clad only in the cloak of stable exchanges.

What is often called the new liberalism extols the virtue of the gold standard, fixed and rigid, as the means of promoting the recovery of international trade, and lending. The policy certainly has its virtue, anyhow in the short run, while the depressed areas loom so appallingly large upon the horizon of wise statesmanship.

(iii) Another monetary policy, of some years standing, has for its object stable prices. Its advocates adduce an obvious argument in its favour from ethical bases: money is a store of value, therefore it ought to be stable in purchasing power. Furthermore, stable prices create business confidence, a condition desirable in itself and conducive of material progress. They argue, too, that greater satisfaction is to be derived from rising incomes with stable prices than from stable incomes with falling prices; no doubt this is true, though some may wonder whether it may not be better for the spirit of man to

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reap the benefits of progress in the latter, rather than in the former, way.

Those who desire stable prices perceive, nowadays, the danger of concealed inflation. But the danger can be averted, according to the authority of Mr. Durbin and Mr. Harrod, principally by manipulating the budget: if an inflationary movement appears, taxation should increase greatly and large scale repayments of public debt be made from the budget surplus. Conversely, of course, if a deflationary impulse gains ascendancy, the budget should not be balanced, the deficit serving to reflate the economy; public works would be an alternative method to the same end.

Mr. Durbin does not insist that the attainment of stable prices necessarily constitutes the best monetary policy; he is impressed particularly by the inflationary impulse resulting from the rising trend of profits, which progress would bring, and by the difficulties presented to the success of this policy by the transition of money among different circulations; money injected into the system, for instance, to bolster up the price-level of goods may find its way into the financial circulation; it may be used, that is to say, on the stock exchange or in some other market dealing in capital assets. At least important accounting changes on the part of the banks would be necessary in order to reveal such a process; and perhaps changes, and particularly the extension of authoritarian control, would need to go much further: a national investment board, having control of all investment, might prove essential.

Professor Irving Fisher, the father of the stable prices family, has long advocated a "compensated" dollar. The compensated dollar would be equivalent to an amount of gold, but not to a fixed amount: if the general price-level advanced, the quantity of gold in the dollar would be increased in corresponding proportion, so raising the value of the dollar and bringing the price-level down again to the old figure (100). Perhaps the most ingenious of all monetary devices, this recommendation is not without weighty objections; the criticisms of Professor Irving Fisher's suggestion, however, may well be read in a compensatingly critical manner!

(iv) The chief desire of the great Swedish economists seems to be the mitigation of cyclical fluctuations. It is clear, how-

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ever, that the policy of the Swedish school would not be a stabilisation of business conditions at a low level; quite the reverse; they want to stabilise economic activity at the top. Again, budgetary methods are brought into play, and very successfully so, to judge by the present prosperity of Sweden, which has the peculiar distinction among all the countries of the world of taking her economists' advice seriously. Perhaps other countries would do likewise, however, if they possessed the Swedish economists; or perhaps they would also need statesmen of the perceptive humility of the Swedish ones!

(v) The Austrian school of economists, whose adherents are by no means confined to Austria, have enunciated the concept of "neutral" money. They are impressed particularly by the consequences which may result from the elasticity of credit. Perhaps the recent reaction to this way of thought has gone too far, and underrated the importance of this "destabilising" factor. The Austrian school analyses monetary phenomena into two sets of causes and effects, namely those from the side of goods and those from the side of money. The latter, so it is contended, must be eliminated; then, whatever may remain of the trade cycle should be allowed to persist, since it will represent "real" tendencies; but, in any case, very little cyclical fluctuation will remain.¹

The writers of the Austrian school perceive that it would not be sufficient simply to stabilise the quantity of money, though this seemed, at one time, to be their policy expressed in practical terms; they now demand that such steps shall be taken as to render the action of money neutral. It is not at all clear what this means in practical terms; furthermore, their arguments are open to the most effective attack because assumptions are made in the course of their theoretical expositions which correspond not even remotely with the world of actuality.

(vi) Another policy, which must command great respect, seeks to establish stable incomes per head of population; the average income for the whole population must be stable. We

¹ It is very difficult to sum up the opinions of numerous authorities, whose theoretical position differs at least in detail, in the space of a paragraph; thus there may be some inadvertent misrepresentation of the views of particular persons contained in these remarks.

have seen that this is felt to entail some loss of satisfaction as compared with the policy of stable prices. There is what some will feel to be a further and more serious drawback to the policy of stable incomes arising from the fact that inheritance from the past would garner the fruits of the future in excessive measure: a stable unearned income of £1,000 a year will be able to buy not only the better equivalents of modern goods in the future, but a greater quantity of these future goods into the bargain. Thus the policy of stable incomes would strengthen the power of the dead hand. It might be argued that compensating taxation could be imposed upon inheritance, but it is unlikely that those who may in future oppose death duties will admit that they ought to be higher than would be equitable under a régime of stable prices.

Stable incomes constitute a policy which Mr. Durbin considers to be markedly easier to put into operation than a régime of stable prices. And this should be a weighty consideration: if the catchwords of monetary policy are going to be bandied about in the political arena, and this would seem to be inevitable unless a major question of party policy is to be sidetracked altogether, then simplicity and ease of execution are virtues of importance. Suggest that the banks would have to alter their accounting methods to facilitate your policy and irresponsible elements among the opposition will shout you down with the cry that the people's savings are in danger!—in danger of expropriation, no doubt, but the precise nature of the danger would not be specified.

(vii) And finally we come to the policy of full employment, of which so much has been said already (particularly in Chapter VIII and Chapter X, Section 3). We may advocate this policy upon very strong ethical grounds, and we may urge its virtue, too, upon grounds of expediency: it is clear to anyone what it means and why it is desirable. And many will believe that the future, a time which we may think of as better in all respects than our own, will insist upon full employment. In the spacious times to come, surely, the thought of permitting mass unemployment will seem almost as intolerable to the future generations as the thought now seems to us of letting people starve through lack of work: we reached the stage, a decade or two ago, of insisting on providing existence for the

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unemployed; our grandchildren, or, let us hope, our children, will insist upon providing the unemployed with what they need and would get in a properly managed world, namely, work.

§II

The question of the compatibility of the various objectives.

The rigid gold standard, on the one hand, or one of two threefold policies.

In considering the policies, whose prominent features are thinly outlined above, we must decide to what extent there is conflict between them.

Mercantilism is incompatible with the maintenance of a rigid gold standard, and perhaps with a policy of neutral money as well, but, since it is not at all clear what the concept of neutral money entails, we will leave this policy out of account altogether.

The rigid gold standard is the great exclusionist; it is incompatible with all the other policies, except, perhaps, the Swedish ideal of abolishing the trade cycle, which might be achieved conceivably, in rigid gold standard conditions, by all countries acting in concert. The policy of ending the trade cycle is compatible, however, with all the rest. Stable prices clearly conflict with stable incomes. Full employment is an objective compatible with all the other desiderata except the rigid gold standard.

Mercantilism we may reject as a policy, for we no longer need to regulate the internal monetary position by manipulating the external trade balance. We may, perhaps, desire to vary mercantilist technique somewhat and try to increase the import of securities, with an eye to strengthening the country for war conditions; that is, try to increase the export of capital; but such an object should be no more than a subsidiary part of monetary policy.

We can decide for the rigid gold standard if we want, but, if we do so, we cannot have stable prices nor stable incomes; we should have to expect involuntary unemployment, not, perhaps, running into millions, if the rigid gold standard were managed sagaciously, but probably considerable at times; and

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perhaps, if the monetary system were, after all, mismanaged, as in the past, unemployment would reach catastrophic levels. If we chose the rigid gold standard, we (in this country) might hope that unemployment would never exceed, let us say, 750,000, two-thirds of which we might reckon to be transitional unemployment, so that only 250,000 would be what we have defined as involuntary unemployment. But if these were our hopes, we might still fear, with a good show of reason, that they would be tragically falsified: we could certainly not say that a million, perhaps two million, unemployed would be thenceforth impossible.

Furthermore, if we chose the rigid gold standard, we ought to expect the trade cycle to endure. In rigid gold standard conditions, cyclical depressions could be avoided only by all countries continuously working very carefully and unselfishly together; it is certain that some country would be called upon, sooner or later, to take altruistic actions not in its own immediate interests. Is that likely to happen? Surely not: and if we may not expect a supernational outlook, then we should expect the trade cycle. Indeed, some authorities consider that all the goodwill in the world could not eliminate the trade cycle while the rigid gold standard was in being.

Alternatively, we can pursue a threefold policy designed to eliminate the trade cycle, stabilise the general level of prices, and maintain full employment; or a threefold policy designed to eliminate the trade cycle, stabilise the average income of the population, and maintain full employment.

If the question of policy is presented in this way, the bulk of support would probably be given to one of these three-point programmes; the rigid gold standard would be considered to possess too many and too grave drawbacks.

In conclusion, three points should be cleared up: in the first place, if either of the threefold policies is adopted, there is no reason why the existing semi-gold-standard arrangements, described earlier in this book as the gold reserve standard, should not be preserved. It is the absolute rigidity of exchange rates which militates against the pursuit of an independent national monetary policy.

Secondly, the elimination of the trade cycle may be, as part of one of the threefold policies, a matter of cure rather than prevention. This is an abstruse question, upon which the

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last word has not yet been said by the leading investigators; but it would seem, at the moment, that a practical policy would take shape as a process of trial and error. While theoretical bases are still being formed in the mould of academic dispute, it is unlikely that statesmen will say, like Col. Blimp, "Gad, sir, Prof. Hoot is right", and proceed to put into operation the full programme advocated by one leading thinker but denounced by the rest. More feasible is a largely opportunist method: the appearance of inflation countered by drastic taxation; the threat of slump staved off by public works.

Finally, more precise attention should be given to what applies to one country and what applies to all. Clearly, a single country can pursue one of the threefold policies and maintain a rigid gold standard simultaneously, so long as it is the only country possessing a rigid gold standard; it is equally clear, however, that there would be no earthly purpose in one country alone maintaining a rigid gold standard, unless all the others had flexible gold standards.

Either of the threefold policies would be attainable by all countries simultaneously; less monetary action of a corrective nature is likely to be required if they all choose elimination of the trade cycle + stable prices + full employment, or all choose elimination of the trade cycle + stable incomes + full employment; if some choose one and some the other, it is going to create difficulty, but this, as we understand these things at present, should not prove to be insuperable.

If an induced export of capital is to become an instrument of policy, it is obvious that all countries cannot obtain a net capital export surplus, nor, indeed, a net capital import surplus, at the same time.

BOOKS

The books examining the subjects of this chapter are difficult. Besides J. M. Keynes: *The General Theory of Employment, Interest and Money*, 1936, see D. H. Macgregor: *Enterprise, Purpose and Profit*, 1934, Chapter III; E. F. M. Durbin: *The Problem of Credit Policy*, 1935; Brinley Thomas: *Monetary Policy and Crises*, 1936; and R. F. Harrod: *The Trade Cycle*, 1936.

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Prof. Irving Fisher's advocacy of the compensated dollar may be found in *The Purchasing Power of Money*, 1911, Chapter XIII, and in subsequent works.

Representative works of the Austrian school are *Prices and Production*, 1931, and *Monetary Theory and the Trade Cycle*, 1933, both by Prof. F. A. von Hayek.

CHAPTER XVII

LOOKING FORWARD

- (i) *The twilight of bills?*
- (ii) *The growth of the cheque-deposit system?*
- (iii) *A better coinage?*
- (iv) *The disappearance of notes?*
- (v) *The nationalisation and internationalisation of banking?*
- (vi) *An international currency?*
- (vii) *Monetary theory: the cumulative processes of the trade cycle at bay?*
- (viii) *A future slump?*
- (ix) *Two budgets, on current account and on capital account?*
- (x) *The passing of Douglas credit?*
- (xi) *The capitalist interlude?*

Looking forward into the monetary future, how much can we distinguish of the shape of things to come? It is certain that our visions will be misleading unless we view the desert of time through the spectacles of Doubt: if we try to see too clearly through the haze of uncertainty, we shall behold a mirage.

(i) Not long ago, it would have been reasonable to say that the inland bill of exchange would shortly become extinct; indeed, one could almost have written that it was extinct. Now, the tendency is not so clear. Foreign bills of exchange still seem likely to follow their recent trend, namely, gradually to become less important, and to fluctuate with the volume of international trade. It is true, too, that the inland bill is virtually dying or dead among commercial firms, but there has sprung up the internal bill covering deferred payment for consumption goods. We might even regard a cash-on-delivery

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note, presented by the post office to recipients of c.o.d. parcels, as a type of sight draft; but that is anyhow of small importance. The inland bill, then, may be said to be kept alive in this country by deferred payment transactions on the part of the public.

The other cause which might stimulate a revival of inland bills is the prevalence of high short-term interest rates; and these would have to endure for a considerable time to produce a noticeable effect. In hazarding an opinion, we may rule out this latter cause. And, concerning deferred payments, it is probable that no great increase in inland bills is to be looked for from this source. Deferred payments are likely to be increased by the vision of a more certain and brighter economic future, but the increase of the average age of the population will work to counteract such a tendency, for it is young married couples who stand in particular need of the facilities of deferred payment. Concerning inland bills, then, we seem to discern a slight, fractional revival, not a large one.

(ii) We can feel somewhat confident in the growth of the cheque-deposit system: the sort of payment suitably made by cheque will come within the compass of larger and larger numbers of people, and the rising scale of payments will increase the scope of the system.

(iii) We may expect with some certainty that sooner or later we shall get a "silver" coinage which does not tarnish; it is not revealed to us whether the more agreeable metal for the higher coins will be the ancient right standard of England, that is, silver of fineness $\frac{925}{1000}$.

(iv) A harder matter to foresee is the future of bank notes. On the whole, we ought to look for a decrease in their use. (If their quantity remains the same, and there is less use for them, that will have an inflationary effect.) The growth of wealth and the secular increase in prices, if this latter continues, should increase the use of notes, but the change-over to cheque-deposits as a medium of payment may more than counterbalance such a tendency. Furthermore, we must look forward to an extension of the subscription system, arising partly from more people availing themselves of the sort of ser-

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vices at present paid for by subscription proper and by relatively large contractual payments, and partly from a growth in the range of the subscription and contract system. Perhaps it would be too fanciful to imagine that our grandchildren will contract with a firm which will attend to all their domestic requirements as a commercial proposition, supplying their food, lighting, heating, and domestic service in their own homes for an inclusive charge; but the drift is of this nature. We find service flats already, and remark Messrs. J. Lyons & Co. Ltd. undertaking large scale catering contracts—very suggestive facts. Free travel, free postal facilities and the like belong, perhaps, only to the further future; but all-in payments for particular kinds of amenities are not grossly improbable during the present century; a "really-all-in" insurance policy, for instance, covering every sort and kind of risk, might be a thing of to-morrow.¹

(v) Should we expect a nationalisation, and, later on, an internationalisation, of banking? It is almost certain to happen sooner or later. The least we may expect is the development of central control of the banking system; this may, it probably will, be exercised by some authority other than the elected representatives of the people. The process may well go much further: all financial institutions, including a body controlling investment, may come under the direction of a single authority, whose tentacles, small to begin with, will spread ever further over the body economic. What we envisage would be the money trust come true; but such an authority would be actuated by motives other than selfish ones. It may be that, before financial control has developed to the extent of requiring unification throughout the world, the monetary method will be in process of supersession by a system based upon other criteria; the economics of plenty will be a science markedly different from the economics of privation. On the contrary, the suppression of individual nationalities may be effected by the benign agency of a global financial authority!

(vi) And with an internationalisation of banking, an inter-

¹ For ideas of this nature see (obviously!) H. G. Wells: *The Shape of Things to Come*, 1933, Book V, Section 5, and *The Work, Wealth and Happiness of Mankind*, 1934, Chapter V, Section 3.

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nationalisation of currency is evidently entailed. Some would suppose that the latter may be achieved with comparative ease, at a time when the national integration of financial machinery is still proceeding. A world currency is an old dream of liberal-internationalist thought, and it was, indeed, almost fulfilled during the half-century before the Great War. In the present trend of neurotic nationalism, to be succeeded more completely, perhaps, by an hysterical partisanship for one form as against another form of government, any institutional approach of peoples to each other would appear to be deferred until the further future: we may get out of the habit of supposing that our own country, our own party, or our own social philosophy is always entirely right and the opposing one always entirely wrong, but the present estrangements and hostilities of large groups are likely to leave mutual distrust with roots so thick and strong as will rot away only in the course of many decades—unless another useless, catastrophic world conflagration convinces the survivors swiftly and emphatically of the futility of mass antagonisms.

(vii) In the realm of monetary theory, we may look forward with some confidence to the hunting down of the trade cycle. Shall we boast and say that within ten years we shall have agreed on the causes of cumulative processes, and have narrowed the field of preventive action to a few alternatives of roughly equal virtue? If we make so bold, it does not follow, of course, that a preventive policy will be in operation; we shall be lucky if a properly comprehended policy of cure is being practised. Ten years may be too little; agreement among academic authorities is notoriously hard to get; the intellectual diehards may be dying in the last ditches of self-assertion during decades; we do not ask for universal agreement. What we can expect is no more than a body of theory, subject, if it must be so, to varieties of terminology, which those prepared to study the matter without prejudice can perceive to contain the true explanation¹ of the cumulative processes resulting in a trade cycle; to reveal, furthermore, the steps necessary to prevent the cumulative processes from taking shape.

(viii) At the present time, while the short-sighted are still

¹ An explanation based upon assumptions corresponding with fact.

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discovering that we are emerging from the great depression, those endowed with longer vision are already considering a future slump. Must it come? If there is war, the slump will come, supposing that the economic fabric endures the process of strife, at the end of the war. If there is no great conflagration, what then? Expressing an opinion widely held, we may say that there exist powerful factors in the present situation tending quite clearly to recession; the fact that this is realised commonly already, combined with the infectiousness of fear, brings nearer the hour of collapse. But this does not necessarily mean that we shall sit down and weep in impotent misery, perforce borrowing to finance unemployment benefit systems when we can tax the country no more. Governments would be wise to fear the social consequences of again lethargically occupying the seats of authority in a world agonised by the paradox of poverty amid (relative) plenty. Social reactions will differ, perhaps profoundly, according to the timing of the next slump. We may expect the slump within ten years, but not so soon as next year, and its magnitude is likely to seem, if not actually to be, proportional to its distance in time.

Thus, if we have, let us say, seven fat and well-favoured years, we may expect, upon the advent of a crisis, a very loud cry for authoritarian remedies: public works at once and on any scale necessary. The knowledge that such a cure would be forthcoming should be able to limit the magnitude of the slump most significantly; perhaps it is the only thing which could mitigate depression to an important extent. There is a time in the transition from boom to slump, which Mr. Harrod describes as the breathing-space, a time when a little government action would go a long way to curbing a cumulative downward movement. We may imagine President Roosevelt, if happily that great man is still in control of the affairs of his forty-eight nations, energetically occupying the breathing-space with "action and action now".

Thus, when we prophesy another huge slump, in the manner of Cassandra, we mean no more than that another tragic depression will occur unless something vigorous is done before recessive tendencies gather strength. It is a potential slump, not an ineluctable one.

(ix) Measures for remedying a slump are likely to be

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facilitated greatly by better national accounting. Under the Danish system, there is a capital budget and a separate current budget. Public expenditure on capital account adds to the national debt, that is, to the liabilities side of the national capital statement. Public works should evidently be valued as assets of the nation; such things as roads, canals and similar amenities in public ownership are evidently semi-durable capital goods of no small importance. But the current budget ought to contribute to such things in two, and, in some cases, three ways: the cost of public assets has been met by borrowing; the current budget should therefore pay the interest on the sum borrowed; in addition, the costs of maintenance of public assets should be met from the current budget; some public assets, however, may be of the type which wear out and do not warrant maintenance—a battleship, for instance; on assets of this sort, the current budget should evidently provide sums for amortisation regularly from year to year during the life of the asset, the amortisation sums being used, in the interim, to reduce the public debt. A large amount of public debt, of course, is dead-weight debt not offset by any corresponding assets, the expenditure in question having been shot to pieces in the form of high explosive and the like bought with money borrowed during a war; it is somewhat doubtful whether violent taxational efforts should be made to repay debt of this sort, for the process of repayment is likely to stimulate a strong deflationary impulse.

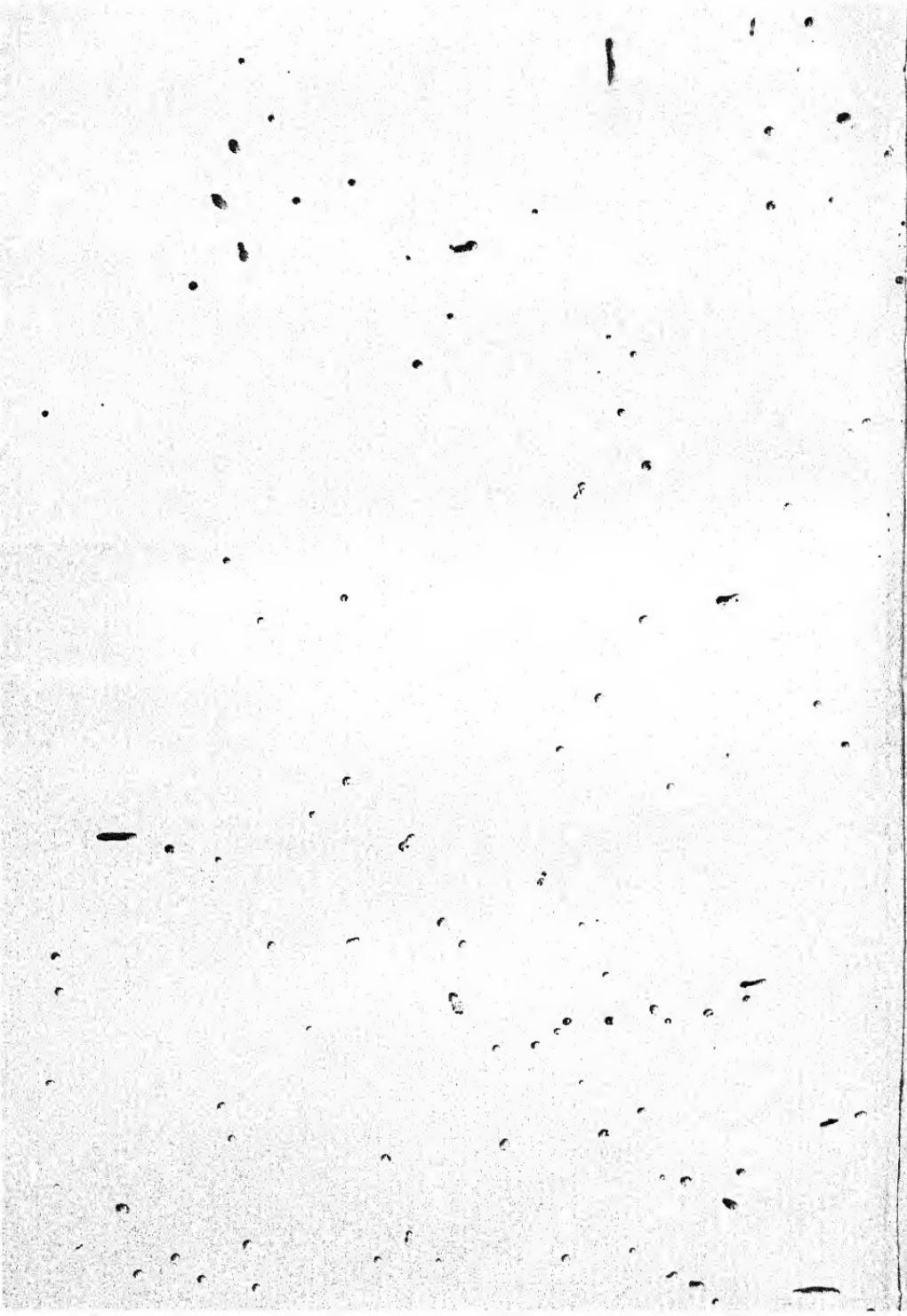
The sensible system of national accounting manifestly consists in separating capital from current items in this way. We may hope for the early adoption of the system by all important countries.

(x) The present revival of prosperity will almost certainly slay the Douglas credit movement; if hardship becomes acute in another recession, however, something of the same nature is liable to recur. We may hold that the Douglas doctrine proceeds from faulty theoretical bases, and that its methods are quite impracticable; yet we ought to recognise, if we value the truth, that the one essential of social credit is a genuine and necessary instrument of policy. The achievement of Major Douglas is to have suggested the feasibility of granting what are not very happily called consumers' credits, a suggestion so

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heretical as to unite even the academic economists in a serried phalanx against him. These consumers' credits are not going to take the form, of course, of loans requiring repayment, which is what their name suggests; Mr. Aberhart, Premier of the Province of Alberta, wants, and will fail, to make them take the form of gifts of money. But our famous measure of unbalancing the budget or promoting public works is really nothing more than the granting of consumers' credits. True, with public works there is something to show for the money; with an unbalanced budget, it is private capital whose value is maintained directly. The only other difference is that an unbalanced budget or a public works programme is a feasible proposition, whereas Mr. Aberhart's method is not.

(xi) In our final paragraph, perhaps we may play with the fascinating question of whether the capitalist system is to occupy merely a brief interlude in the economic history of man. We cannot admit the possibility that the capitalist system will go on for ever and ever; man has a grander destiny than that! But will our children see an almost all-pervading capitalism, as we see it universally, excluding Russia, at the present; or will they know equality of opportunity and common ownership of the means of production? How long is this materialist-individualist phase going to last? We may perceive alternatives, as so often before, hinging upon the question of peace and war: if it is peace, perhaps we can look, and some, at any rate, will hope, for a gradual limitation of the concept of private property, which will take many decades, and perhaps centuries, to accomplish; if it is war, then a socialist, or some will say communist, state, and possibly a world state, may be a matter of only a decade or two. But, even those who consider such a change as overwhelmingly desirable in itself should certainly pause long before bringing about war to achieve it.



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